



THE PERMANENT FUND
**ALASKA'S
RENEWABLE
REVENUE**

LESSON & ACTIVITY BOOK



alaskaresource™
E D U C A T I O N

APFC ALASKA PERMANENT
FUND CORPORATION





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An Introduction

The Alaska Permanent Fund was established in 1976 to permanently save and invest at least 25% of the state's oil royalties for intergenerational benefit. The Alaska Permanent Fund Corporation is a state-owned corporation based in Juneau, Alaska that manages the assets of the Alaska Permanent Fund and other funds designated by law. APFC's pioneering investment model has been recognized globally for its ability to create and grow value for Alaska on a sustainable basis.

Alaska's youth are the future leaders of our great state. As the investment manager of Alaska's largest renewable financial resource, APFC recognizes the Alaska Permanent Fund and the youth are essential aspects of Alaska's future. The lessons in this workbook were created to teach and empower Alaska's youth about financial literacy, the Fund, its structure, investment management, and how the Fund is used to convert non-renewable mineral resources into a renewable economic resource for Alaska at middle school and high school education levels.





Standards Crosswalk

OBJECTIVE	AK MATH	AK SCIENCE	AK GOV	AK HIS
Explore the impact of resource development revenues on the State of Alaska's finances and how the Alaska Permanent Fund functions as a renewable financial resource through savings, investing, and producing revenue.	N-Q.1-3 A-SSE.1 A-CED.1-3 F-BF.1	ESS3-1 ESS3-2 ESS3-3 ESS3-4	C-1 C-3 C-5 F-2 F-4 F-5	AH.CPD.6 AH.CPD.7 AH.CC.5





The Permanent Fund: Alaska's Renewable Revenue

Alaska's Renewable Revenue is curriculum developed in partnership with the Alaska Permanent Fund Corporation. Students will learn about the Alaska Permanent Fund, investing, how smart investors use diversification to ensure stability and maximize on returns, while learning about the value the Fund provides our state.

Check out the videos developed for the curriculum.

The Permanent Fund – Alaska's Renewable Revenue

<https://vimeo.com/akresource/alaskasrenewablerevenue?share=copy>



The Permanent Fund – Diversification

<https://vimeo.com/akresource/arrdiversity?share=copy>





Video 1 Questions

Video 1 - The Permanent Fund

Questions:

1. What are some benefits of the oil industry?
2. What was built in the 1970's to transport oil?
3. Oil is not a renewable resource, meaning it will run out someday and the money the state of Alaska makes will stop flowing with it. What was created to help ensure there is money for future generations, even after the oil stops flowing?
4. What percent of money from royalties for leasing land for oil, gas and mining goes into the Fund?

Stop video at 1:20 to answer and discuss above questions.

5. What is the name of the account where the profits from investing go?
6. Since 1976, how much income has the Permanent Fund provided for Alaska?
7. Is Alaska's Legislature allowed to spend as much money as they want from the Earning Reserves Account?
8. What are some examples of things the Fund pays for?

Answers:

1. Jobs, development, sweet work schedule (0:10)
2. The Trans-Alaska Pipeline (0:20)
3. Alaska Permanent Fund (0:39)
4. At least 25%, per The Alaska State Constitution (1:04)
5. The Earnings Reserve Account (1:30)
6. Portfolio diversification (1:58)
7. Over \$80 billion (1:44)
8. No, they made a rule that limits the amount they can take from the Fund every year (2:09)
9. Schools, public safety, natural resources, PFD (2:27)





Video 2 Questions

Video 2 - Renewable Revenue

Questions:

1. What are some of the natural resources in Alaska that fuel our economy?
2. What is Alaska's biggest single source of revenue?
3. What do the APFC team of experts do to help the Permanent Fund grow?
4. The APFC team of experts invest in which four categories?
5. What is diversification and why is that the strategy that APFC uses?

Stop video at 1:40 to answer and discuss above questions.

6. What is the savings account of the Permanent Fund called?
7. How does a diverse diet relate to diverse investments for the Fund?
8. Diversifying our investments is not about making a quick buck. It's about _____?

Answers:

1. Oil & gas, mining, fishing (0:08)
2. The Alaska Permanent Fund (0:19)
3. Invest the money from the Permanent Fund (0:48)
4. Stocks, bonds, real estate, and private equity (1:04)
5. Diversification is spreading your investments among different investment categories or asset classes. This is done so that if one investment goes badly, the others can still do well. (1:25)
6. The Principal (1:50)
7. A diverse diet means you eat a variety of foods, and if something goes wrong with one food source, it is ok, because you have other options. In that sense your diet is balanced and healthy and you are not relying on any one food source to keep you alive. (2:00-2:50)
8. Sustainable, long-term growth (3:00)





Create-A-State:

**Essential Question: How do states have money to run their government?
What role do natural resources play?**

Grade:

9-12

Time:

1 hour

Overview:

Students will learn about how Alaska became and stayed a state due to its natural resources (namely, oil resources) and to challenge them to think about how you can transform a non-renewable resource into a renewable resource.

Assessment:

Can the student effectively describe how the Alaska government funds its needs with different revenue streams?
Can the student articulate potential issues with having a non-diverse revenue stream?

Vocabulary:

Natural resources, Renewable resources, Nonrenewable resources, Revenue, Oil reservoir, Commercial fishing, Taxes, Investment, Commercial Fishing

TEACHER INFORMATION AND PROCEDURE

Prior Knowledge for students:

The student should be able to define and give an example of a source of revenue for the state. They should understand what industries (resources) are major economic contributors to the state of Alaska.

Materials Needed:

- Resource generation cards
- Oil, fish, and mineral cards

What to do in Advance:

- Print out 1 set of Resource Generation cards
- Print out oil/fish/mineral cards (1 set of each needed per group. I.e. if you have 5 groups, you need 5 sets)
- Option to laminate all cards

TEACHING THE LESSON

Gear-up:

- Ask students what they think the state of Alaska helps pay for around their community or the state. Discuss things like schools, university, roads, ports, troopers, VPSO, fish and game, medical programs for those in need, etc.
- Ask students how the state can afford those expenses. Where does the money come from?





Create-A-State:

Explore:

In teams of 4 or 5, students are tasked with starting a brand-new state and generating revenue to meet the budget needs of their government. To make money, they can sell off three of their most plentiful resources: oil, minerals, and fish.

The goal of the game is for students to meet their government's annual budget demands of \$80,000 using only these resources as their revenue streams, and to make them last as long as possible. They should also consider whether these resources are enough to fully support their government.

How to play the game:

Pass out 5 oil cards, 3 mineral cards and 3 fish cards randomly to each group. Remaining cards should be sorted by type but randomized in a pile (1 pile for leftover oil, 1 for leftover fish, and 1 for leftover minerals).

Year 1:

Each team draws a Resource Generation card and reads it out loud to the group. They will do what the card tells them to do, which may be either drawing or discarding a resource card, or no action. The teacher will collect all discarded cards and pass out new cards to those who need them. The students can choose which cards they want to discard but if they are drawing a new card, it will be random.

After each team has drawn and completed their actions, all teams will pay \$80,000 to their government (a separate pile face down so it is clearly separate from their resource money cards, or the teacher will come around and collect). They can use any combination of their resource cards to pay their government. Once they pay, each group gets a new fish card before they start the next round (explain that this is because fish are a renewable resource).

Year 2 – x:

Repeat the previous steps. When a team runs out of their fish cards, they no longer get a fish card replenished (they overfished the resource).

When a team can no longer pay the yearly budget using their natural resources, they are out. Let the other teams continue to play until none of the teams can still pay their government.

If a team does not have the exact "change", they have to pay at least \$80,000 (e.g. if they only have \$90,000 they have to pay that much).

You may optionally add variation to the state budget each year – e.g. the state has approved a lot of road construction projects for this upcoming season, so the state budget this year is \$100,000.





Create-A-State:

Generalize

Discuss with students what factors (environmental and human) from the resource generation cards helped and which ones hurt their ability to meet their state budget each year.

- When considering the type of resources available, which are non-renewable and which are renewable? How did this impact your ability to use these resources?
- What can be done to support your state when non-renewable resources no longer can?
- Is there a way to make revenue from natural resource industries (oil and mining) last longer, despite them being a non-renewable resource?

Discuss why having diverse revenue streams in Alaska are important, and the other resources that already contribute significant revenue for the state.

What might they do if they were given a large amount of money that they could use today and also have for their future?

Introduce the concept of the Alaska Permanent Fund, which was established in 1976 to invest some of the revenue obtained from Alaska's oil and gas reserves. Managed by the Alaska Permanent Fund Corporation (APFC), the Fund's value today is over \$76 billion dollars, which has grown from the first deposit from oil revenues of \$734,000 in 1977.

Show the students the video "The Permanent Fund – Alaska's Renewable Revenue".

Assess

Can students identify the state of Alaska's biggest revenue streams and explain how they are connected to our natural resource industries? Can they explain the importance of setting some of the revenue aside to support Alaskan's today and in the future?

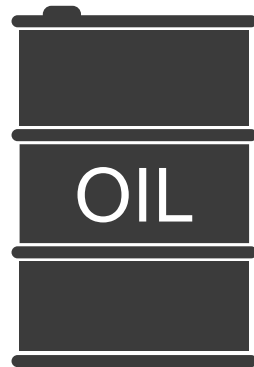
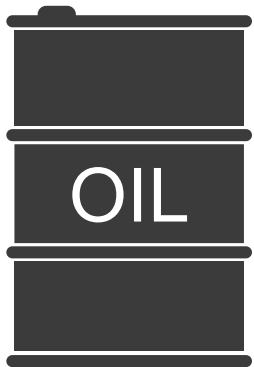
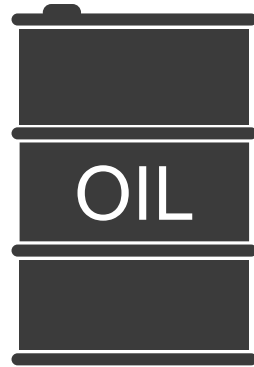
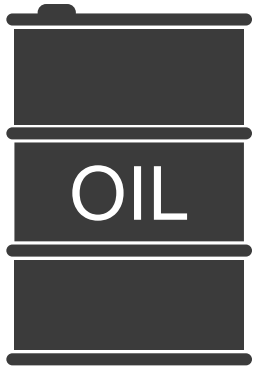
Extensions, adaptations, and more resources

- Have the students play the game again with additional natural resources and discuss similarities/differences with the outcome
- Have the students create their own Resource Generation cards
- Explore Alaska's state budget



Create-A-State:

Resource Cards (front)





Create-A-State: Resource Cards (back)

**200 barrels
\$20,000**

**200 barrels
\$20,000**

**300 barrels
\$30,000**

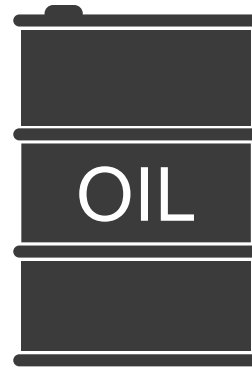
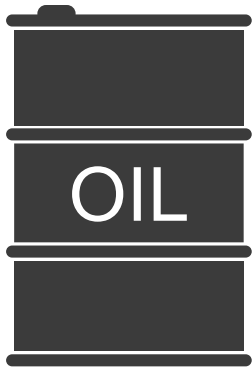
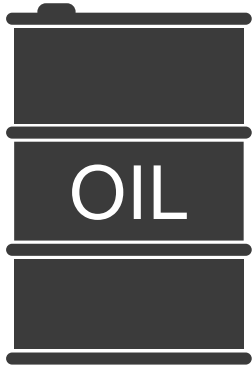
**300 barrels
\$30,000**





Create-A-State:

Resource Cards (front)





Create-A-State:

Resource Cards (back)

100 barrels
\$10,000

100 barrels
\$10,000

500 barrels
\$50,000

500 barrels
\$50,000

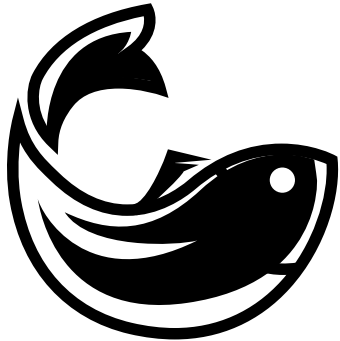




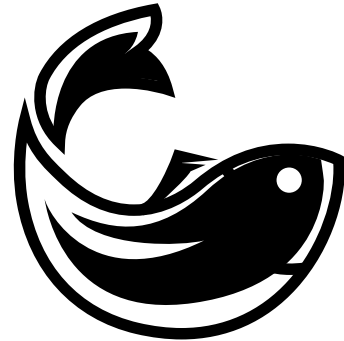
Create-A-State:

Resource Cards (front)

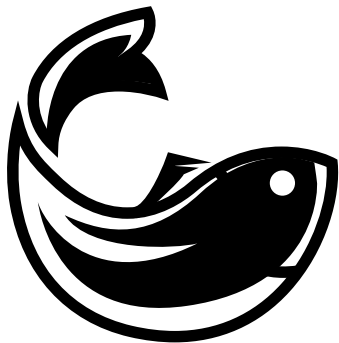
FISH



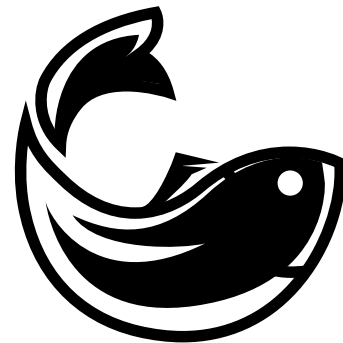
FISH



FISH



FISH





Create-A-State: Resource Cards (back)

**10 tons
\$10,000**

**10 tons
\$10,000**

**50 tons
\$50,000**

**50 tons
\$50,000**

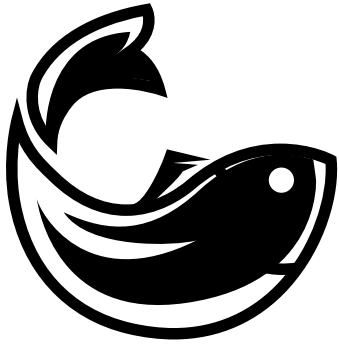




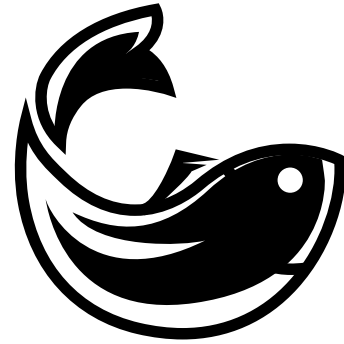
Create-A-State:

Resource Cards (front)

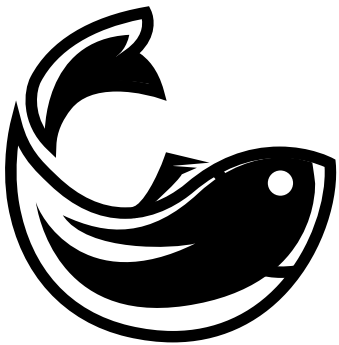
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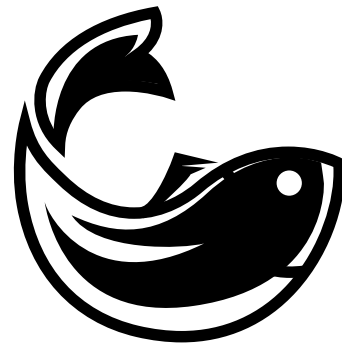
FISH



FISH



FISH





Create-A-State: Resource Cards (back)

**20 tons
\$20,000**

**20 tons
\$20,000**

**30 tons
\$30,000**

**30 tons
\$30,000**

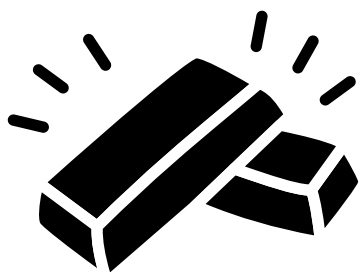




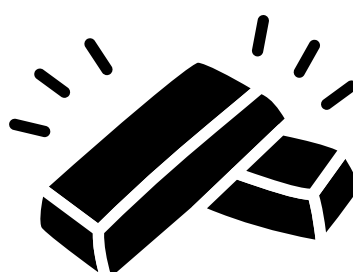
Create-A-State:

Resource Cards (front)

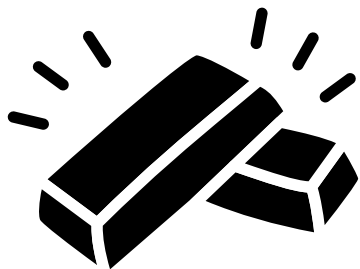
MINERALS



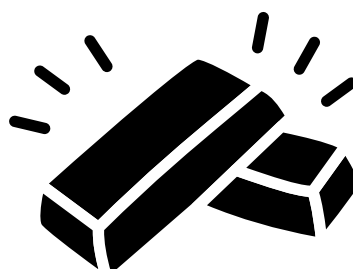
MINERALS



MINERALS



MINERALS





Create-A-State: Resource Cards (back)

450oz Silver
\$10,000

450oz Silver
\$10,000

10oz Gold
\$20,000

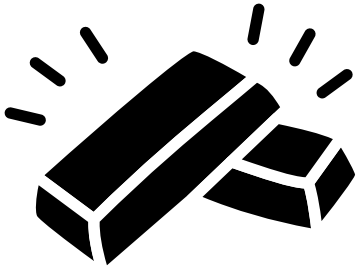
10oz Gold
\$20,000



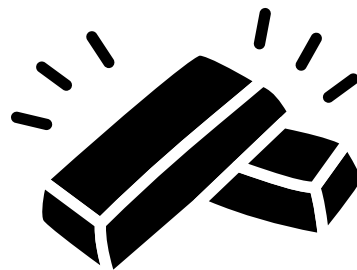


Create-A-State: Resource Cards (front)

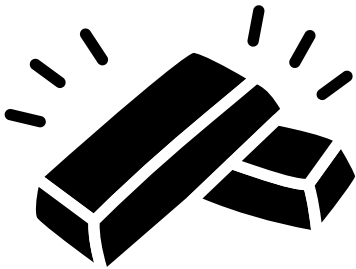
MINERALS



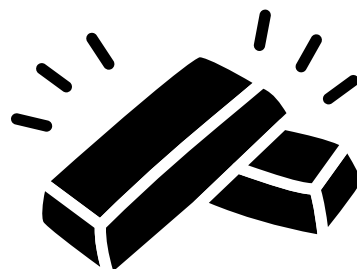
MINERALS



MINERALS



MINERALS





Create-A-State:

Resource Cards (back)

12oz Zinc
\$30,000

12oz Zinc
\$30,000

6 tons Copper
\$50,000

6 tons Copper
\$50,000





Create-A-State: Resource Cards (front)

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**





Create-A-State: Resource Cards (back)

<p>An oil company in your state discovered a new oil reservoir.</p> <p>Draw 1 oil card</p>	<p>An oil company in your state had a spill.</p> <p>Discard 1 oil card</p>
<p>Oil production was good this year.</p> <p>Draw 1 oil card</p>	<p>Oil prices crash!</p> <p>Discard 2 oil card</p>





Create-A-State: Resource Cards (front)

<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>
<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>





Create-A-State: Resource Cards (back)

<p>New land was opened up for oil exploration.</p> <p>Draw 1 oil card</p>	<p>Oil prices dropped and companies had to let employees go. This slowed production.</p> <p>Discard 1 oil card</p>
<p>Frozen pipes halt oil production for a few days.</p> <p>Discard 1 oil card</p>	<p>Tax credits were given to oil companies to explore for more oil.</p> <p>Draw 1 oil card</p>





Create-A-State: Resource Cards (front)

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**





Create-A-State: Resource Cards (back)

<p>Oil prices are stable.</p> <p>No action</p>	<p>War breaks out and the U.S. can't trade for oil, so Alaska must drill for more oil.</p> <p>Draw 1 oil card</p>
<p>An environmental group protests your project. All project progress is halted.</p> <p>Discard 1 oil card</p>	<p>Normal oil production year.</p> <p>No action</p>





Create-A-State: Resource Cards (front)

<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>
<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>





Create-A-State: Resource Cards (back)

**There was a great run
of salmon this year!**

Draw 2 fish cards

**The fishing industry
could not find enough
employees to fish.**

Discard 1 fish card

**A warming climate
decreases fish
populations.**

Discard 1 fish card

**An invasive fish
species starts to
impact Alaska
fish runs.**

Discard 1 fish card





Create-A-State: Resource Cards (front)

<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>
<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>





Create-A-State: Resource Cards (back)

<p>Gas prices go down and fishing is less expensive.</p> <p>Draw 1 fish card</p>	<p>Commercial fishing is business as usual.</p> <p>No action</p>
<p>A restoration project helped fish spawning habitats.</p> <p>Draw 1 fish card</p>	<p>Upgrades to commercial fishing boats increased production.</p> <p>Draw 1 fish card</p>





Create-A-State: Resource Cards (front)

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**





Create-A-State: Resource Cards (back)

<p>Gas prices go up, and fishing is more expensive.</p> <p>Discard 1 fish card</p>	<p>The local community is worried your commercial fishing is hurting their fishing.</p> <p>Discard 1 fish card</p>
<p>Fishing is stable.</p> <p>No action</p>	<p>The weather was nice, you were able to fish more days.</p> <p>Draw 1 fish card</p>





Create-A-State:

Resource Cards (front)

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**

**RESOURCE
GENERATION**





Create-A-State: Resource Cards (back)

<p>Mineral production is excellent.</p> <p>Draw 2 mineral cards</p>	<p>One of your large mines came to the end of its mine life.</p> <p>Discard 2 mineral cards</p>
<p>A new mineral deposit was discovered by an exploration company.</p> <p>Draw 1 mineral card</p>	<p>An exploration mine got several of its permits denied.</p> <p>Discard 1 mineral card</p>





Create-A-State: Resource Cards (front)

<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>
<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>





Create-A-State: Resource Cards (back)

Good production year for your mining industry.

Draw 1 mineral card

An advanced exploration mining project got its permits accepted.

Draw 1 mineral card

An increased production of renewal energy technology creates demand for mineral commodities.

Draw 1 mineral card

A large deposit of a rare earth metal discovered in your state leads to increased industry activity.

Draw 1 mineral card





Create-A-State: Resource Cards (front)

<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>
<p>RESOURCE GENERATION</p>	<p>RESOURCE GENERATION</p>





Create-A-State: Resource Cards (back)

An environmental group protests your project. All project progress is halted.

Discard 1 mineral card

An advanced exploration mining project got its permits denied.

Discard 1 mineral card

Mineral prices dropped and companies had to let employees go.

Discard 1 mineral card

One of your mining companies gets a fine for being out of compliance.

Discard 1 mineral card





The Permanent Fund: A Renewable Financial Resource

Essential Question: How do the mineral revenues from Alaska’s oil and gas industries provide for Alaskans today and in the future? What is the Alaska Permanent Fund? How does Alaska invest the Permanent Fund and manage it for the long run, as a renewable financial resource? What are the risks/rewards associated with investing and why is it important to diversify your investments?

Grade:
9-12

Time:
One class period

Overview:

Students will demonstrate how the Alaska Permanent Fund is managed as a renewable financial resource for Alaska. Students will learn what investments are and understand the importance of long-term investing and diversification

Assessment:

Can the student explain how Alaska uses the Permanent Fund to benefit Alaskans today and save money for future generations?

Who manages and invests the Permanent Fund?

Explain what an investment is and why diversification is important?

The student should be able to define and give an investment example of a stock, bond, and real estate.

Vocabulary:

Financial Market Report, Investment, Diversification, Long-term Investment, Principal, Bonds, Inflation, Real Estate, Reward, Risk, Stocks, Taxes

TEACHER INFORMATION AND PROCEDURE

Prior knowledge for students:

Students should be able to articulate the purpose of the Alaska Permanent Fund, and give examples of common investments. Students should understand the concept of risks/rewards in the context of investing.

Materials needed:



**Scan to view
PowerPoint**

- “How to Invest” PowerPoint slides: <https://tinyurl.com/yc3nc83v>
- Financial market report cards
 - Play money:
 - \$1,000 per group: 8 x \$100, 18 x \$10, 20 x \$1
 - One bank set per class: mixed denomination pack of play money (e.g. 20 pieces of \$1’s, \$5’s, \$10’s, \$20’s, and \$50’s)

What to do in advance:

- Print out 1 set of market cards (laminated-optional)
- Separate money into the correct (listed above) amounts for each group.
- Have 4 different colored or labeled bins for each team’s money:
 - Cash • Stocks • Bonds • Real estate
- Ask students how the state can afford those expenses. Where does the money come from?





The Permanent Fund: A Renewable Financial Resource

Gear-up:

Ask the students if they earned a lot of money, what would they do with it. Would they spend it all right away? Would they save some for the future, and if so, how much and why? Ask them about other ideas they might have to do with their savings, like investing it to earn more money. Ask them if a state government had savings, what could they do with it?

Have the students brainstorm examples of how a state could use its' money. How can they make their savings renewable through investing to be able to use some today and make sure there is always some left for the future? Introduce the concepts of investment and diversification with the included PowerPoint. Discuss the importance of not putting all your money in one place, as well as the potential risk and rewards of each type of investment. Ask students what factors could impact a state's savings and their investments.

Explore:

Students should be placed in the same teams as the previous lesson, and that they again are representing their newly founded state. Explain that the natural resources alone can no longer provide enough to support the state and so they are responsible for investing some of the revenue from natural resources to support the government today and ensure that it can continue to support them in the future. The point of the game is to support your government today while also growing your pool of money each year, and the team with the most money in year 5 wins.

Year 1

Each team starts with the same amount of money, \$1,000.

Each team can invest as little or as much of their money as they want into the 3 different investment types, they can also save some in cash if they don't want to invest it all.

The teacher will draw a financial market report card and read it to the whole group. (These cards can be reused if needed). Using this information, the team must calculate how much money their investments made or lost based on how much they had in each type of investment. If they lost money overall, they will pay it to the bank (teacher); if they gained revenue from an investment, the bank (teacher) will pay them.





The Permanent Fund: A Renewable Financial Resource

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$100	-5%	$100 \times 0.05 = 5$	$100 - 5 = \$95$
Bonds	\$400	3%	$400 \times 0.3 = 12$	$400 + 0.3 = 12$
Real Estate	\$300	10%	$300 \times 0.10 = 30$	$300 + 30 = \$330$
Savings	\$200	N/A	N/A	\$200
			Total	\$1,037

AMOUNT GAINED OR LOST (FINAL - INITIAL)

$\$1,037 - \$1,000 = \$37$

For year 2, each team can change their investment allocations if they desire. At the end of the round, students calculate their revenue gained or lost in the same manner as above.

After the 5th year, each team should count their money to see which generated the most investment earnings over the course of the 5 years.

Generalize:

Discuss with the students how the Alaska Permanent Fund through prudent investment, transforms a portion of Alaska's non-renewable resources into a renewable financial resource. The goal is to make sure the Principal is maintained, that the Fund is invested to achieve the maximum returns possible – with as little risk as possible, and generate consistent revenues to support Alaskans today while ensuring that it can also benefit future generations.

Watch the video "Alaska's Renewable Revenue: Diversification"

Assess:

- Can students explain how through investment, the Permanent Fund transformed Alaska's non-renewable resources into a renewable financial resource to benefit current and future generations of Alaskans?

Extensions, adaptations, and more resources:

Have students research and present how much money the Permanent Fund contributes to Alaska every year. How many people work to manage the Permanent Fund and what types of investments do they make? Discuss how oil revenues (price and production) affect the state's revenue stream, and how the role of the Permanent Fund has evolved over the years to support the state and all Alaskans.





The Permanent Fund: 5-Year Report Tracking

YEAR 1:

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$			
Bonds	\$			
Real Estate	\$			
Savings	\$	N/A	N/A	
			Total	

AMOUNT GAINED OR LOST (FINAL - INITIAL)

YEAR 2:

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$			
Bonds	\$			
Real Estate	\$			
Savings	\$	N/A	N/A	
			Total	

AMOUNT GAINED OR LOST (FINAL - INITIAL)





The Permanent Fund: 5-Year Report Tracking

YEAR 3:

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$			
Bonds	\$			
Real Estate	\$			
Savings	\$	N/A	N/A	
			Total	

AMOUNT GAINED OR LOST (FINAL - INITIAL)

YEAR 4:

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$			
Bonds	\$			
Real Estate	\$			
Savings	\$	N/A	N/A	
			Total	

AMOUNT GAINED OR LOST (FINAL - INITIAL)





The Permanent Fund: 5-Year Report Tracking

YEAR 5:

			Initial	\$1,000
Investment Type	Investment Amount	Market Report (Gained or Lost%)	Amount Gained or Lost	Value of Account After Market Report
Stocks	\$			
Bonds	\$			
Real Estate	\$			
Savings	\$	N/A	N/A	
			Total	

AMOUNT GAINED OR LOST (FINAL - INITIAL)





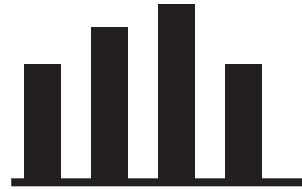
The Permanent Fund:

A Renewable Financial Resource
Market Cards (front)

MARKET CARD



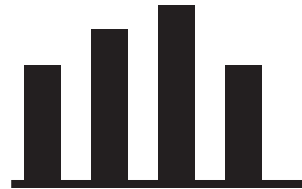
MARKET CARD



MARKET CARD



MARKET CARD





The Permanent Fund:

A Renewable Financial Resource
Market Cards (back)

ANNUAL MARKET REPORT

Stocks: down 5%
Bonds: down 3%
Real Estate: down 10%

ANNUAL MARKET REPORT

Stocks: down 15%
Bonds: down 4%
Real Estate: down 5%

ANNUAL MARKET REPORT

Stocks: down 10%
Bonds: down 3%
Real Estate: up 5%

ANNUAL MARKET REPORT

Stocks: down 10%
Bonds: down 2%
Real Estate: down 2%





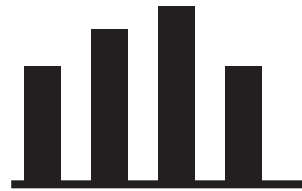
The Permanent Fund:

A Renewable Financial Resource
Market Cards (front)

MARKET CARD



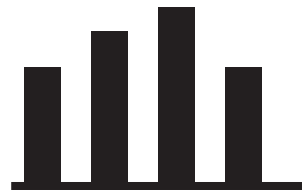
MARKET CARD



MARKET CARD



MARKET CARD





The Permanent Fund:

A Renewable Financial Resource
Market Cards (back)

ANNUAL MARKET REPORT

Stocks: up 5%
Bonds: down 3%
Real Estate: up 2%

ANNUAL MARKET REPORT

Stocks: up 5%
Bonds: up 2%
Real Estate: up 2%

ANNUAL MARKET REPORT

Stocks: down 10%
Bonds: up 3%
Real Estate: down 5%

ANNUAL MARKET REPORT

Stocks: up 10%
Bonds: down 3%
Real Estate: down 5%





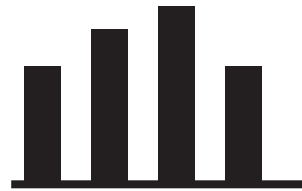
The Permanent Fund:

A Renewable Financial Resource
Market Cards (front)

MARKET CARD



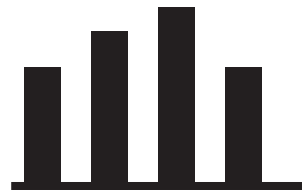
MARKET CARD



MARKET CARD



MARKET CARD





The Permanent Fund:

A Renewable Financial Resource
Market Cards (back)

ANNUAL MARKET REPORT

Stocks: up 15%
Bonds: down 5%
Real Estate: up 10%

ANNUAL MARKET REPORT

Stocks: down 15%
Bonds: up 2%
Real Estate: down 5%

ANNUAL MARKET REPORT

Stocks: up 5%
Bonds: up 3%
Real Estate: up 5%

ANNUAL MARKET REPORT

Stocks: up 5%
Bonds: up 3%
Real Estate: up 5%



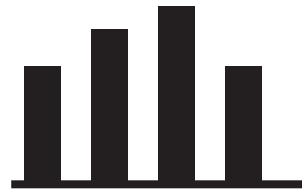


The Permanent Fund: A Renewable Financial Resource Market Cards (front)

MARKET CARD



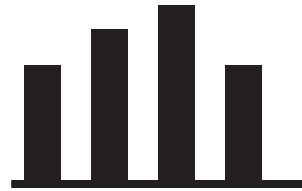
MARKET CARD



MARKET CARD



MARKET CARD





The Permanent Fund:

A Renewable Financial Resource

Market Cards (back)

ANNUAL MARKET REPORT

Stocks: up 5%
Bonds: down 2%
Real Estate: down 1%

ANNUAL MARKET REPORT

Stocks: down 5%
Bonds: down 2%
Real Estate: up 5%

ANNUAL MARKET REPORT

Stocks: down 10%
Bonds: up 3%
Real Estate: down 5%

ANNUAL MARKET REPORT

Stocks: up 10%
Bonds: up 3%
Real Estate: down 10%





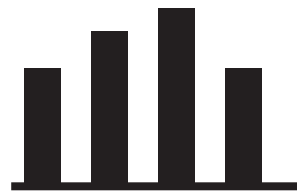
The Permanent Fund:

A Renewable Financial Resource
Market Cards (front)

MARKET CARD



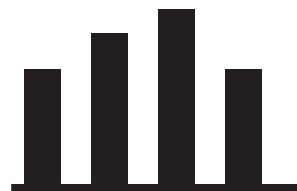
MARKET CARD



MARKET CARD



MARKET CARD





The Permanent Fund:

A Renewable Financial Resource

Market Cards (back)

ANNUAL MARKET REPORT

Stocks: down 10%
Bonds: up 4%
Real Estate: up 10%

ANNUAL MARKET REPORT

Stocks: up 15%
Bonds: down 2%
Real Estate: up 5%

ANNUAL MARKET REPORT

Stocks: down 5%
Bonds: up 3%
Real Estate: down 1%

ANNUAL MARKET REPORT

Stocks: down 5%
Bonds: up 3%
Real Estate: down 1%





The Permanent Fund: Group Money (front)





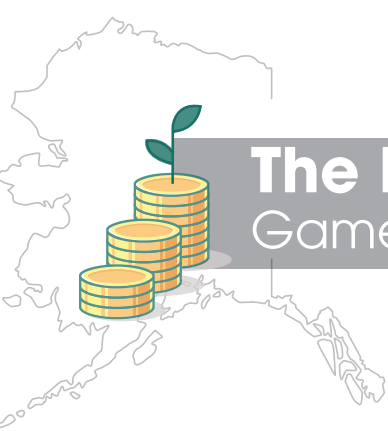
The Permanent Fund: Group Money (back)





The Permanent Fund: Game Money (front)





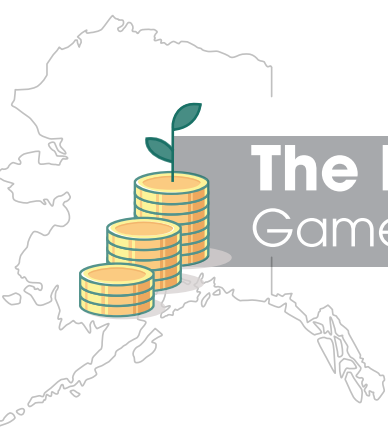
The Permanent Fund: Game Money (back)





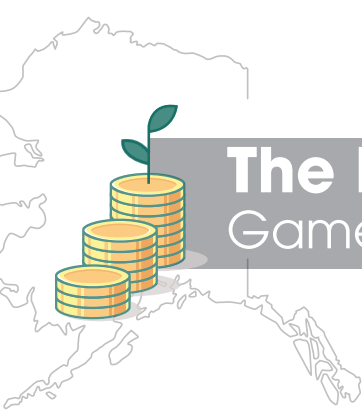
The Permanent Fund: Game Money (front)





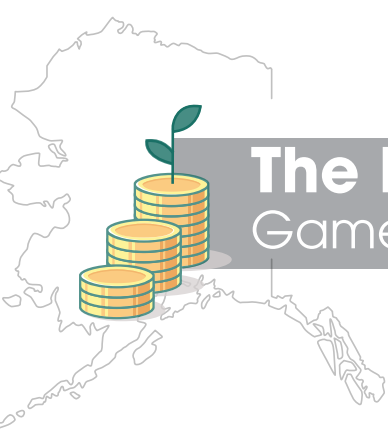
The Permanent Fund: Game Money (back)





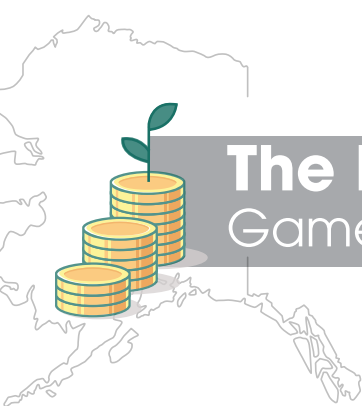
The Permanent Fund: Game Money (front)





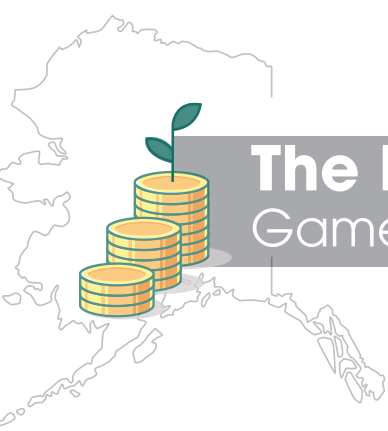
The Permanent Fund: Game Money (back)





The Permanent Fund: Game Money (front)





The Permanent Fund: Game Money (back)





The Permanent Fund: Bank Money (front)



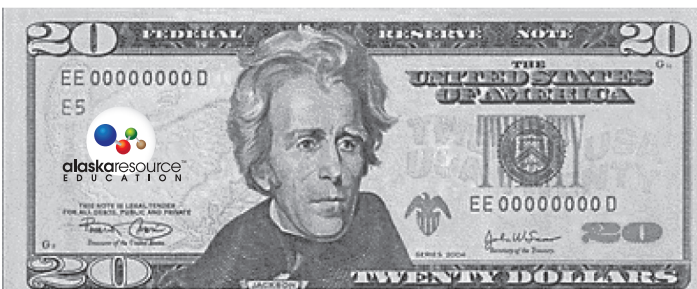
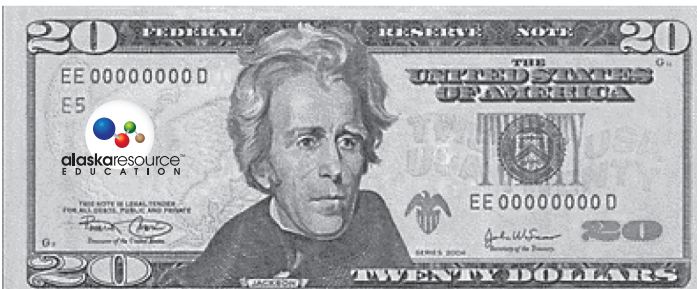


The Permanent Fund: Bank Money (back)





The Permanent Fund: Bank Money (front)



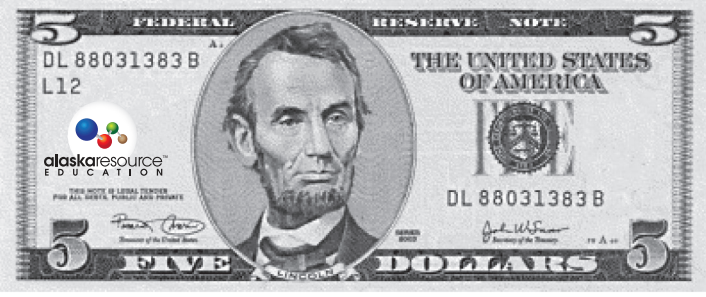
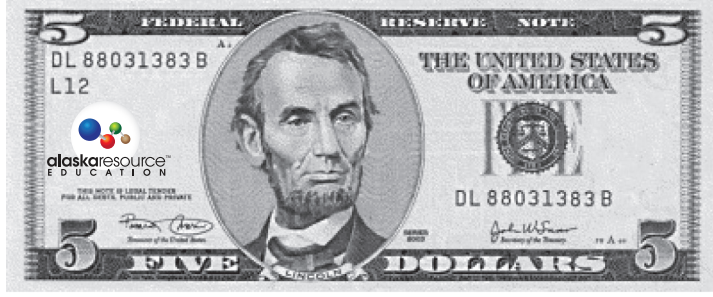
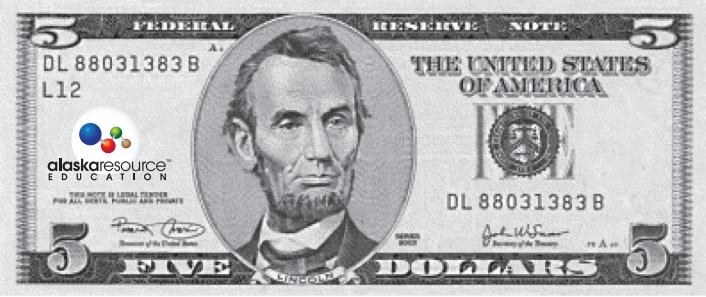
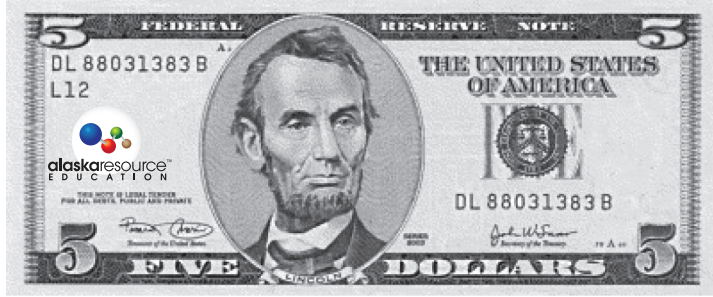
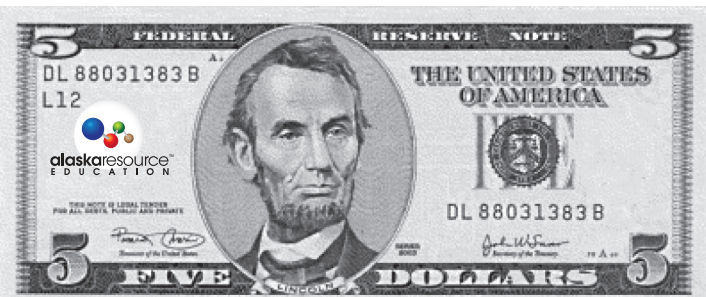
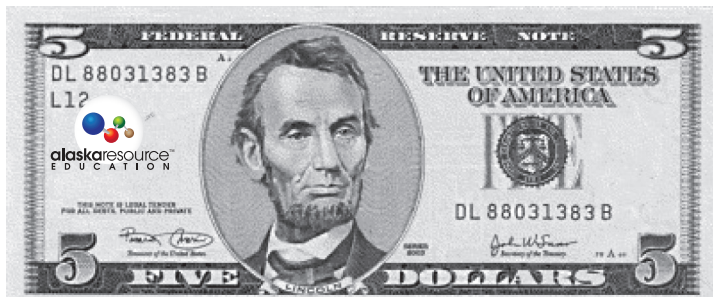


The Permanent Fund: Bank Money (back)





The Permanent Fund: Bank Money (front)



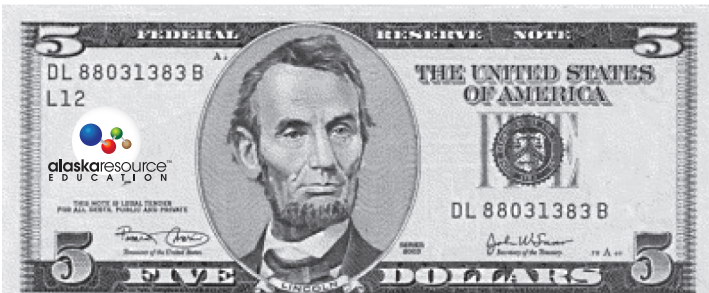
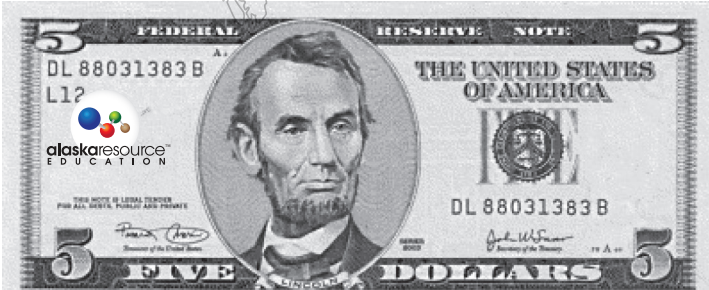


The Permanent Fund: Bank Money (back)





The Permanent Fund: Bank Money (front)





The Permanent Fund: Bank Money (back)





The Permanent Fund: Bank Money (front)





The Permanent Fund: Bank Money (back)





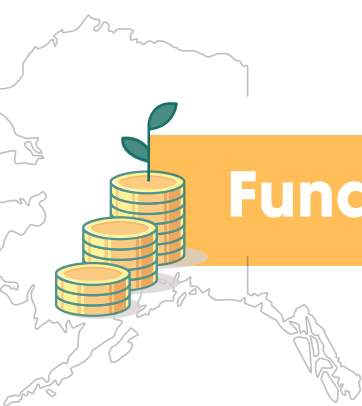
The Permanent Fund: Bank Money (front)





The Permanent Fund: Bank Money (back)





Fund Sustainability Simulation Game

Essential Question: How does the money of the Permanent Fund get managed and spent?

Grade:

9-12

Time:

One class period

Overview:

Students will role play management of the Permanent Fund and help make sure it is able to benefit Alaskan's today and in the future, equally.

Assessment: Can students:

- Demonstrate the importance of compromise and long-term planning?
- Explain the concept of the POMV rule and why it was enacted?
- Describe the Corporate and Legislative roles and responsibilities concerning the spending of the Permanent Fund?

Vocabulary:

Corporation, Legislature, Compromise, Appropriation, Constitution, Statute, Spending, POMV, Savings

TEACHER INFORMATION AND PROCEDURE

Prior knowledge for students:

- Students should have a basic understanding of what the Permanent Fund is, why, and how it came into existence.
- Students should have a working understanding of how the Alaska Permanent Fund is structured.
- Students should understand APFC's role in managing the Alaska Permanent Fund.
- Students should comprehend how APFC makes money for Alaska.

Materials needed:

- Class set of budget items (1 per group, laminate optional)

What to do in advance:

Review APFC videos, found here: <https://tinyurl.com/AKrenewableresource>

Complete the previous two lessons in the workbook: Create-a-State and The Permanent Fund: A Renewable Financial Resource

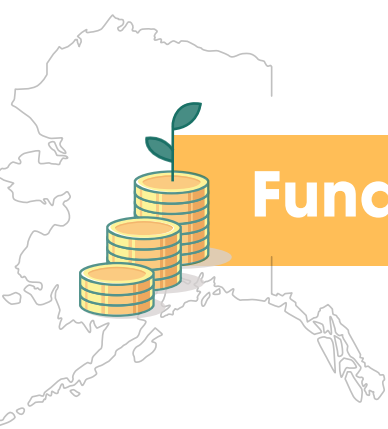
TEACHING THE LESSON

Gear up:

Begin with a brief discussion and overview of the history and significance of the Permanent Fund for the State of Alaska. Overview how money flows into the Fund and how it is invested (review the prior two lessons).

Ask students: How do you think money from the Permanent Fund can be spent? Who decides who spends it? What is that money used for?





Fund Sustainability Simulation Game

Explore:

Students will engage in a role-playing activity to simulate how the Permanent Fund is managed to be a sustainable financial resource. Tell students that their school has a reserve savings account started by students years before them that they can use, and it is also invested to keep growing as time goes on. The account was created to ensure that the money in the account would help current students and all students in future years, but the current student council can always spend from the account as they see fit. Investments do well in some years, and not as well in others, but overall, the balance of the account goes up 5% each year.

Tell the students that today, the account sits at \$100,000.

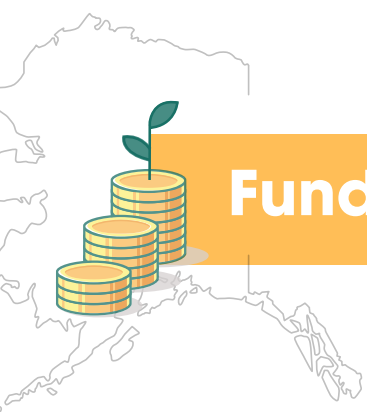
Brainstorm a list of student/school needs that the money could be spent on with the entire class. Divide the list into “annual/today needs” (i.e. prom, yearbook) and “periodic/future needs” (i.e. new textbooks, new technology, supplies, etc.)

Students will be placed in 5-6 groups, depending on class size. They represent the student body. In groups, student have 5-10 minutes to decide on a proposed yearly spending budget. They will be provided a “menu” of annual and periodic needs with associated costs to help them decide on a budget. One representative from each group will share their ideas with the rest of the class.

After hearing all of the proposals, remind students that the savings account has \$100,000 this year, and normally grows at 5% per year. This means that if nothing is spent, it will have \$105,000 in year 1, and because of the power of compound interest it would have \$162,889 by year 10, \$265,330 by year 20, and \$432,194 by year 30. Each group must figure out how many years their reserve savings account will last if the student body spent their proposed budget year after year. Discuss as a whole group: are the budgets they came up with sustainable? Is it fair for the future generation of students?

Tell the students they will get back in their groups again, except this time instead of coming up with a budget proposal, they will come up with a proposed rule for spending each year (e.g. the current student body may only spend 5% of the reserve account each year, except every 5th year 10% may be spent on any major upgrades/purchases). Their rule must consider both the short-term and long-term needs of the student body – while also remembering the fact that the fund only grows at about 5% per year. This time, they are vying to be chosen for student council, and will present their ideas out to the class and teacher. The class will listen to all presentations and vote on which group’s spending rule is the most viable and financially sound, picking a winning group to sit on the student council. They must be able to show mathematically that their spending rule is sustainable (i.e. makes the money reserve last at least 2 years beyond the first round).





Fund Sustainability Simulation Game

Additionally, students may propose ideas about ways to increase the amount of money in the reserve account through fundraising and sponsorships, so that a bigger yearly spending budget can be maintained. This can be included in their presentations as justification for their spending budget rule.

Generalize: Ask the students:

- How difficult was it to think about future generations of students to ensure the reserve savings account didn't run out?
- Is it the responsibility of current generations to take care of future generations financially?
- Even if the current generation makes a recommendation to sustainable spending, is it realistic to assume all future generations might follow suit? Why or why not?

Relate the game to how the Alaska Permanent Fund Corporation (APFC) manages the Permanent Fund. Long supported by the APFC Board of Trustees, the Legislature adopted a Percent of Market Value (POMV) rule to guide withdrawals from the Permanent Fund. This formula is designed to give the state a predictable revenue stream while ensuring sustainability by limiting the amount of the draws.

The POMV draw is based on a percentage of the average market value of the Fund for the first five of the preceding six fiscal years. The draw is subject to appropriation and is set in statute at 5%.

Assess:

Can students:

Demonstrate the importance of compromise and long-term planning?

Explain the concept of the POMV rule and why it was enacted?

Describe the Corporate and Legislative roles and responsibilities concerning the spending of the Permanent Fund?

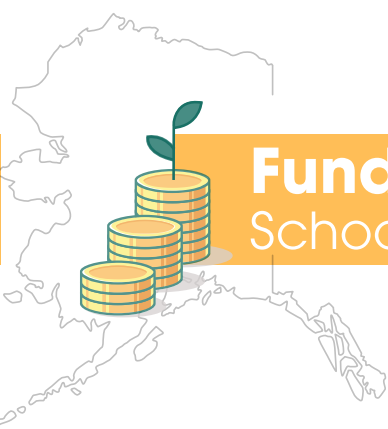
Extensions, adaptations, and more resources:

Have students play the game for multiple "years" and change the investment growth percentage each year.

Explore current issues in the state legislature regarding the POMV and others that pertain to Permanent Fund and create discussion.

Compare and contrast state governments and have students present on their findings. <https://akleg.gov/>





Fund Management Simulation Game

School Budget Menu

Reminder: Your budget currently sits at \$100,000, and grows at roughly 5% interest each year.

CURRENT/YEARLY NEEDS

Prom	\$5,000
Other dances*	\$2,500
Yearbook	\$2,000
Sports teams and club travel**	\$6,000
Basic classroom supplies and upgrades	\$3,000
Pep rallies & other in-school events*	\$2,000
Individual club fund requests**	\$3,000
School trip to Hawaii	\$15,000

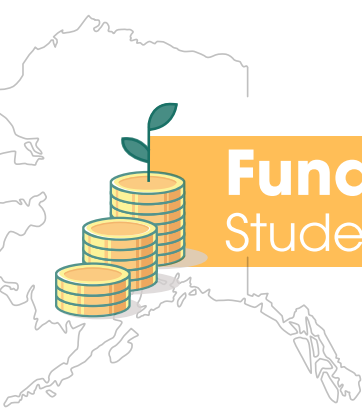
FUTURE/PERIODIC NEEDS

Many of the same needs as current students as well as large items	
Technology upgrades	\$10,000-\$50,000
School parking lot upgrades (more student parking)	\$5,000
Sports team uniforms and equipment**	\$10,000

*per item

**per 5 items





Fund Management Simulation Game

Student Council Proposed Budget

List your proposed yearly budget items here:

Line Item

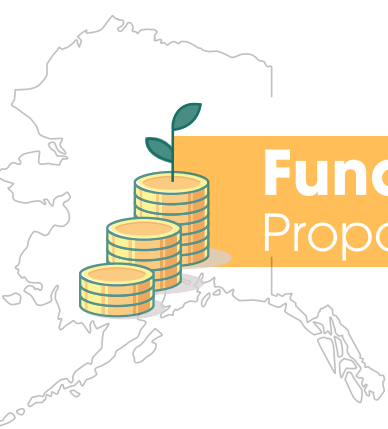
Cost

Justification: In a couple sentences describe why you chose the budget you did.

With your above proposed budget, how many years will your reserve account last? Remember that it grows at 5% each year.

Year	Initial	Investment Growth	Spending	Final
1	\$100,000	$(\$100,000 \times 0.05) + 100,000 = \$105,000$	\$20,000	$\$105,000 - \$20,000 = \$85,000$
2	\$85,000	$(85,000 \times 0.05) + 85,000 = \$89,250$	\$20,000	$\$89,250 - \$20,000 = \$69,250$





Fund Management Simulation Game

Proposed Budget

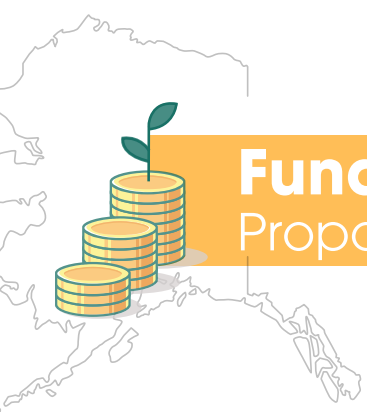
Example:

Year	Initial	Investment Growth	Spending	Final
1	\$100,000	$(\$100,000 \times 0.05) + 100,000 = \$105,000$	\$20,000	$\$105,000 - \$20,000 = \$85,000$
2	\$85,000	$(85,000 \times 0.05) + 85,000 = \$89,250$	\$20,000	$\$89,250 - \$20,000 = \$69,250$
3				
4				
5				

Spending budget rule: In your group, come up with a spending budget rule that will be enacted for your annual budget and all would remain in effect for future years as well. The goal is to maintain the reserve savings account indefinitely, while still keeping in mind the needs of today and future students. You will present your rule and justification to the class and to the school "board" (the teachers) with the goal of becoming selected as student council representatives.

Our spending rule is:





Fund Management Simulation Game

Proposed Budget

Our budget justification (your fule must ensure money lasts at least 2 years longer than your first round)

Year	Initial	Investment Growth	Spending	Final
1	\$100,000	$(\$100,000 \times 0.05) + 100,000 = \$105,000$		
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				





THE PERMANENT FUND
**ALASKA'S
RENEWABLE
REVENUE**