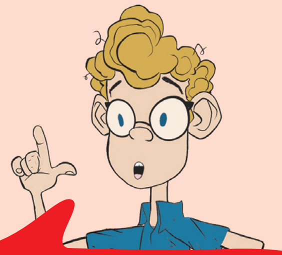


3

How important is money?

STEAM Project 3

Budgeting

What do adults have to spend every month?

Project Overview

What will students do?

In this project, students will learn how much it costs to manage a house, how to budget for those expenses, and how to create a savings plan based on an existing budget.

STEAM Objectives

Session 1	Session 2
Math Objective • Students will sequence household costs from most to least expensive.	**Math Objectives** • Students will sequence monthly expenses from most to least expensive. • Students will calculate the percentage of the monthly budget that each expense represents. • Students will create a pie chart with the percentages of the monthly budget.
Session 3	**Final Event**
Math Objective • Students will research how they can economize and make savings on a household budget.	**Objective** • Students will present their posters and money-saving plans. • Students will listen to other groups' presentations, choose one of the budgets and answer questions about it.

Sessions Preview

STEAM Focus		Teaching Resources
Session 1	Math	Index cards
Session 2	Math	Students' list of expenses from Session 1 Monthly Expenses worksheet Calculator Ruler
Session 3	Math	Poster paper Students' Monthly Expenses worksheets
Final Event		Students' posters Masking tape or adhesive putty

Session 1

Math Objective Students will sequence household costs from most to least expensive.

Teaching Resources Index cards (seven per student)

Lead into the Lesson (5 min.)

- Ask: ***Did you buy anything this week? How much money did you spend?***
- Ask students if they think adults spend money on the same things as them.

1 Look at the picture and read the text. (5 min.)

- Invite a volunteer to read the driving question aloud: *What do adults have to spend every month?*
- Ask: ***What are we going to learn in this project?*** (what adults have to spend every month)
- Have students look at the picture and read the text. Ask the questions shown in the activity: ***What are the monthly expenses? What costs the most? How can you budget to save money?*** and invite volunteers to respond. Accept all answers at this time.

2 Label the monthly expenses. (10 min.)

- Have students read the words in the word box. Explain any of the terms, e.g., *mortgage = money from the bank to buy a house which you pay back each month.*
- Have students label the pictures. Invite volunteers to say which of the expenses they think apply to their families' households.

3 Write the expenses in order from most to least expensive. What do you think costs the most every month? (10 min.)

- Form groups (maximum five). Tell students this will be their group for the remainder of the project.
- Clarify that students shouldn't do any research at this point. They should discuss and decide together the order of the expenses from most to least expensive.
- Remind students that there are no right or wrong answers because expenses will vary across households.
- Tell students to export and save their work.

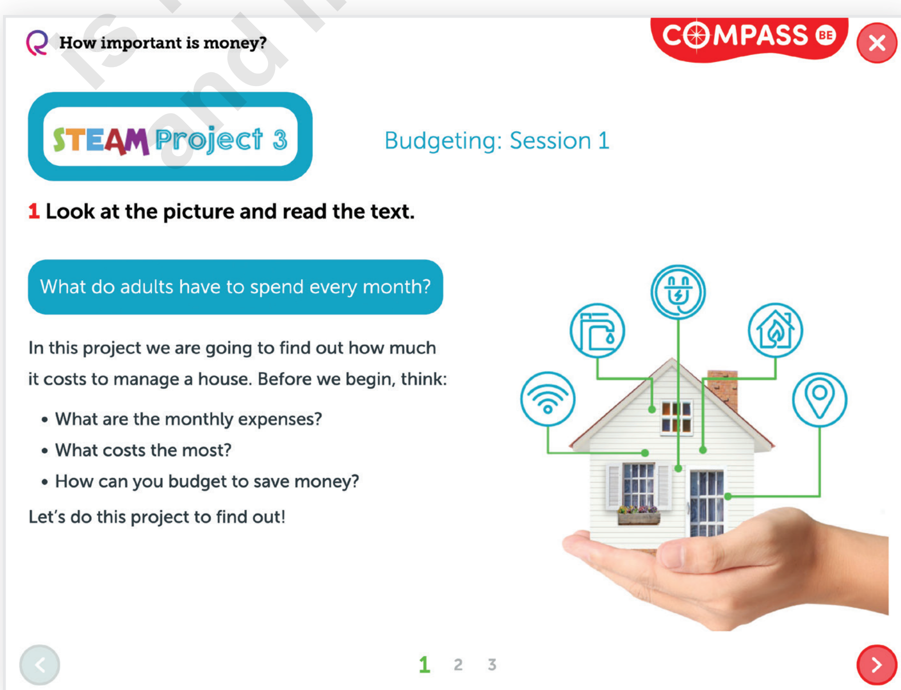
4 Compare your ideas with your classmates'. Do you have the same order? Discuss. (10 min.)

- Have groups compare their order of expenses with each other.
- Discuss whether all the groups have the same order. Discuss which expense groups generally think is the most and which is the least.

Wrap Up the Lesson (10 min.)

- Have students write each of the expenses on an index card or a sticky note. Tell them to take the notes home and ask their families to put the expenses in the order for them and compare it to the order they created in their groups.
- Explain that personal finances are private. Emphasize that students do not need to ask for the actual amount they spend on each item, just the order.

Teachers may now evaluate students for Session 1 on the platform.



Session 2

Math Objectives Students will sequence monthly expenses from most to least expensive.
Students will calculate the percentage of the monthly budget that each expense represents.
Students will create a pie chart with the percentages of the monthly budget.

Teaching Resources Students' list of expenses from Session 1, Monthly Expenses worksheet, calculator, ruler

Lead into the Lesson (5 min.)

- Invite volunteers to recall what they did in the previous session. Ask: ***What were some of the monthly expenses we discussed in Session 1?***

1 Look at the list of average expenses. Put them in order from most to least expensive. (5 min.)

- Have students look at the average expenses and put them in order from most to least expensive.
- Ask: ***How similar/different are these expenses to the order you made in Session 1? How similar/different are they to the order of expenses you made with your families?***

2 Calculate the percentage of the total amount for each expense. (15 min.)

- Hand out the Monthly Expenses worksheet. Have students add up all the expenses to get a total.
- Ask students if they know how to calculate a percentage. Have them read the steps to calculate percentages and do the example with them on calculators.
- **Know Your Students:** Calculating percentages may not be something your students have already done in math class. Give students some other numbers for them to practice with. Encourage them to help each other until they all feel more confident about the process.
- Have groups calculate the percentage of each item on the expenses list. Ask students if they know how to round the numbers after the decimal point. Explain that you can round them up or down. To obtain a whole number, you round up if the number after the decimal point is 55 or greater, and down if the number is 54 or less.

3 Complete the pie chart on the worksheet. (10 min.)

- Guide students to make a pie chart with their percentages.
- Tell them 50% is half the pie and 25% is a quarter of the pie. Encourage students to divide their pie charts into four equal (25%) sections with light pencil lines to help guide them plot the percentages of the expenses they have calculated.
- When students have divided up their pie chart, have them color the sections and then complete the color key to show what each section represents.

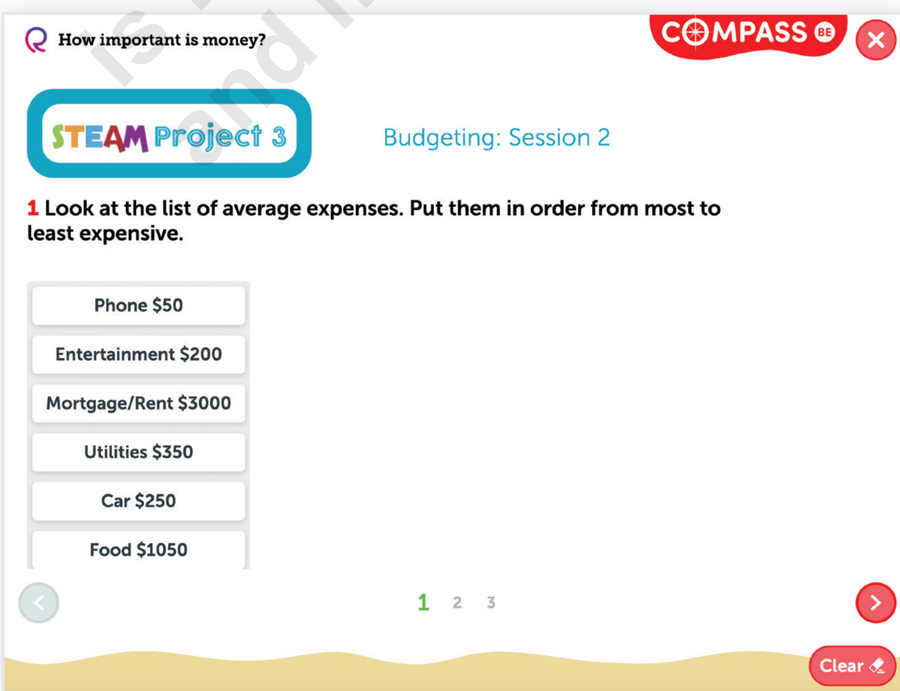
4 Work in your groups. Imagine you have $4000 a month for expenses. Make a budget. (10 min.)

- Have students allocate their budget to each of the monthly expenses and discuss in their groups. Encourage them to use what they have learned so far and their pie chart to help them allocate their monthly expenses.

Wrap Up the Lesson (5 min.)

- Invite volunteers from each group to share their budget. Ask: ***Who is spending the most/least on (rent)?***
- Collect students' pie charts. They'll use them again in Session 3.

Teachers may now evaluate students for Session 2 on the platform.



Session 3

Math Objective Students will research how they can economize and make savings on a household budget.

Teaching Resources Poster paper (one per group), students' Monthly Expenses worksheets

Lead into the Lesson (5 min.)

- Elicit the expenses that are typically included in monthly budgets (mortgage/rent, utilities, food, etc.) Explain that these things are called *essentials*.
- Ask: ***What else would you like to spend money on?*** Write their ideas on the board.

1 Look at your budget from Session 2. Imagine you want to save money for something special. (10 min.)

- Have students read the instruction. Ask the first question from the activity: ***What do you want to save money for?*** Direct students' attention to the list and ask them to decide what they would like to spend money on.
- Once students have made their choices, ask: ***How much do you need?*** Guide students to estimate the cost of each item and then add up the total in case they have chosen more than one option. Have them write the amount of money they need.

2 Create a mind map of ideas. (10 min.)

- Tell students that they are going to brainstorm ideas for saving money on each of their monthly expenses.
- Encourage them to think of small and big things they can do to reduce spending and to save, and then decide on the most practical/feasible.
- If students have access to the Internet, encourage them to research money-saving ideas online.
- Have students complete a mind map like the one shown in the activity with their ideas.

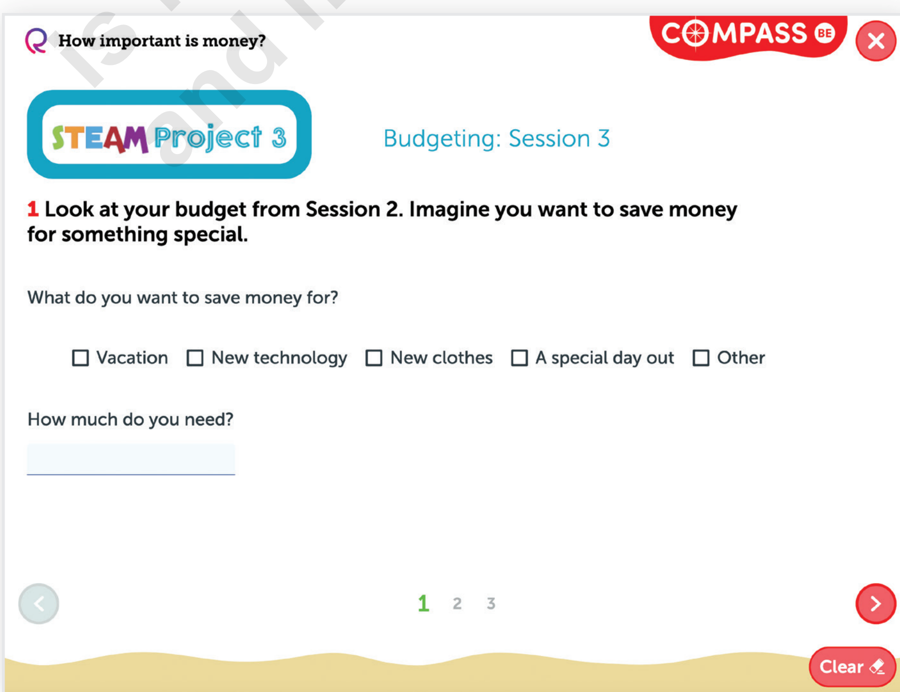
3 Make a poster of your money-saving plan. Follow the steps. (20 min.)

- Invite a volunteer to read the steps aloud.
- Have groups work together to put all the elements of their budget and money saving ideas together on their poster.

Wrap Up the Lesson (5 min.)

- Tell students that they are going to present their posters in the next session.
- Have the groups briefly discuss how they want to divide the presentation.
- Collect students' posters for the final event.

Teachers may now evaluate students for Session 3 on the platform.



Session 4 - Final Event

Objectives Students will present their posters and money-saving plans.
Students will listen to other groups' presentations, choose one of the budgets and answer questions about it.

Teaching Resources Money saving plan poster, masking tape or adhesive putty

Lead into the Lesson (5 min.)

- Distribute students' posters.
- Have the groups review the information on their posters and recall who is going to give each part of the presentation.

1 Present your poster and money-saving plan. (5 min.)

- Tell students to display their posters around the classroom.
- Explain that each group will have five minutes to give their presentations.
- Ask each group to start presenting their poster with their expenses and money-saving plan.
- **Know Your Students:** Some students may be nervous about presenting to the class, causing them to forget what they are saying or lose their place in the presentation. Be prepared to ask leading questions to help students successfully complete their part of the presentation.

2 Listen to your classmates' presentations. (20 min.)

- Have students listen to their classmates' presentations.
- Encourage them to write the ideas for saving money they like the best.

3 Choose one of the other groups' budget and answer the questions. (5 min.)

- Have students choose another group's poster to write about.
- Monitor and help students as they answer the questions.
- **Manage Your Class:** Allow students to answer the questions individually or in pairs.

4 Vote for the best money-saving tip. (10 min.)

- Elicit students' favorite money-saving tips and make a short list on the board.
- Once you have a short list, ask students to vote for the very best with a show of hands. Encourage students to explain why they think it's the best idea.

Wrap Up the Lesson (5 min.)

Choose how well you can do these.

- Tell students they are going to think about what they have learned in the project and rate their skills.
- Remind them that the evaluation is not scored or graded. Emphasize that the students' self-assessment is a tool to help them think about what they know well and where they can learn more.
- Invite volunteers to read the sentences in the chart. Then have students choose the options that best describe how well they have acquired each skill.

Teachers may now evaluate students for the Final Event on the platform.