Name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Challenge

Build an app that converts a dollar amount to the equivalent amount in a different currency of your choice. Follow the directions in *Variables - On Your Own* (<http://aka.ms/VariablesOnYourOwn>). This is NOT a tutorial.

Directions

Before you begin the coding portion of this activity, locate the image and currency conversion rate that you found in your research during the last class meeting.

1. Open the TouchDevelop link above.
2. Select **edit in TouchDevelop**.
3. Select **edit**.
4. The program script should open. You will see instructions in the script editing space.
5. Follow the directions.
6. Practice good problem-solving skills and ask your neighbors for help.
7. Build your converter incrementally. Code a portion, test it, and revise it before going on to the next step.
8. Assess your project using the rubric below.
9. Answer the questions.

Name(s):

Assess Your Work

| Criteria | Does not meet expectations | Working to meet expectations | Meets expectations | Exceeds expectations | Comments |
| --- | --- | --- | --- | --- | --- |
| The background image fits the selected country and does not detract from the foreground elements. |  |  |  |  |  |
| The title is correctly placed and is informative. |  |  |  |  |  |
| The app prompts the user for a dollar amount and saves it in a well-named variable. |  |  |  |  |  |
| The dollar amount is converted correctly and saved in a well-named variable. |  |  |  |  |  |
| The converted amount is posted to the wall and labeled. |  |  |  |  |  |
| A “stop” function has been added so that the user can begin again to convert another amount. |  |  |  |  |  |
| A reverse conversion option is offered (optional). |  |  |  |  |  |
| I used methodical problem-solving strategies. |  |  |  |  |  |

Questions

1. Why would you want to use variables in a game?
2. What kind of information (data) can a variable hold?
3. How is a parameter used in a function?
4. Refer to the following line of code to answer the questions.

var amount := wall->ask number("Enter an amount")

1. What is the variable?
2. What kind of information is stored?
3. What is the function?
4. You have discussed many ways that variables can be used. Think about the kinds of information about you that your school keeps. List at least five different variables and what they would hold if you were writing a program for your school to keep student information.
5. Following the same idea of the program for your school, what kind of functions would the program need? What would it need to be able to do? List five functions and what they would be used for.