## Survival

## Phase 1- Designing Your Land

The tech team will meet with Ms. Horvath to create the land tiles. The remaining group members will design the land.

Step 1- Brainstorm uses for the four landforms.

| Water | Land | Forest | Mountains |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |

Your land will be a 6 by 6 array and must include forest, water, mountains, and open land. Think about survival as you make decisions about the location of your landforms.

Follow the key and design your land.
$\square$ Mountains


Open Land
$\square$
Water


Forest

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

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## Phase 2-Calculating and Explaining your Percentages

What percentage of each landform did you decide to use and why.

Forest $\qquad$ \%

Open Land $\qquad$ \%

Water $\qquad$ \%

Mountain $\qquad$

Which landform covers the largest percentage of your land? $\qquad$

Why did you choose more of this landform than the others?
How does this landform help you survive?
$\qquad$
$\qquad$
$\qquad$

Which landform covers the second largest percentage of your land? $\qquad$
Why did choose more of this landform than the other two?
How does this landform help you survive?
$\qquad$
$\qquad$
$\qquad$

Which landform covers the third largest percentage of your land? $\qquad$
Why did choose more of this landform than the other one?
How does this landform help you survive?

Which landform covers the smallest percentage of your land? $\qquad$
How does this landform help you survive?
$\qquad$
$\qquad$
$\qquad$

Think about the location of your mountains, water, forest, and open land. Why did you choose these locations? How does it help with survival?


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## Phase 3- Writing the Script

You will use Lego people to walk your land and describe the features. You will explain the reasons for choosing the locations and amount of each landform.
Write your script below.

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## Phase 4- Recording and Mathematical Extension.

You will need to take turns using the tiles to record. When you are not recording, you are completing the mathematical extension.

Using your script above, create a video of your Lego person exploring and describing your land.
You may use an approved app of your choice. Suggestions: Explain Everything or iMovie All group members must contribute.

Your video should be between 1 and 2 minutes

## Mathematical Extension.

Suppose each tile represented one square mile of land.
How many square miles is your land? $\qquad$

Use a proportion to determine the number of square miles each landform would cover if your land was the size of Medfield. Medfield is 14.59 square miles.

## Forest:

Open Land:

Water:
Mountains:

Use a proportion to determine the number of square miles each landform would cover if your land was the size of Massachusetts. Massachusetts is 10,554 square miles.

Forest:
Open Land:

Water:
Mountains:

Use a proportion to determine the number of square miles each landform would cover if your land was the size of the US. The US is $3,805,927$ square miles

Forest:
Open Land:

Water:
Mountains:

Use a proportion to determine the number of square miles each landform would cover if your land was the size of North America. North America is 9,365,000 square miles

Forest:
Open Land:

Water: Mountains:

Use a proportion to determine the number of square miles each landform would cover if your land was the size of the world. The world is $57,308,738$ square miles

Forest:
Open Land:

Water:
Mountains:

What percentage of the world's land is the United States? $\qquad$
What percentage of the United States is Massachusetts? $\qquad$

What percentage of Massachusetts is Medfield? $\qquad$
What percentage of the world's land is Massachusetts? $\qquad$
What percentage of the United States is Medfield?

