

Sundial Activity

SUBJECTS

Math
Science
History
Geography

LESSON OVERVIEW

Children will learn and be inspired by Greek and Roman history and the sundial they developed based in the length of the shadow cast by a stick-gnomon. In the beginning of the lesson, the children will go through the journey of how the sundial was made and then they will have to create one using the tools and technology we have now. With the help of the artist, children will discover, learn, and program the sundial and later be able to play and explore its elements and all it represents.

NEW VOCABULARY

-Sundial
-Variables
-Loops

Blocks Menu

Visual Blocks options offered for this lesson

move forward by ??? pixels

move backward by ??? pixels

turn right by ??? degrees

turn left by ??? degrees

jump backward by ??? pixels

jump forward by ??? pixels

set width ???

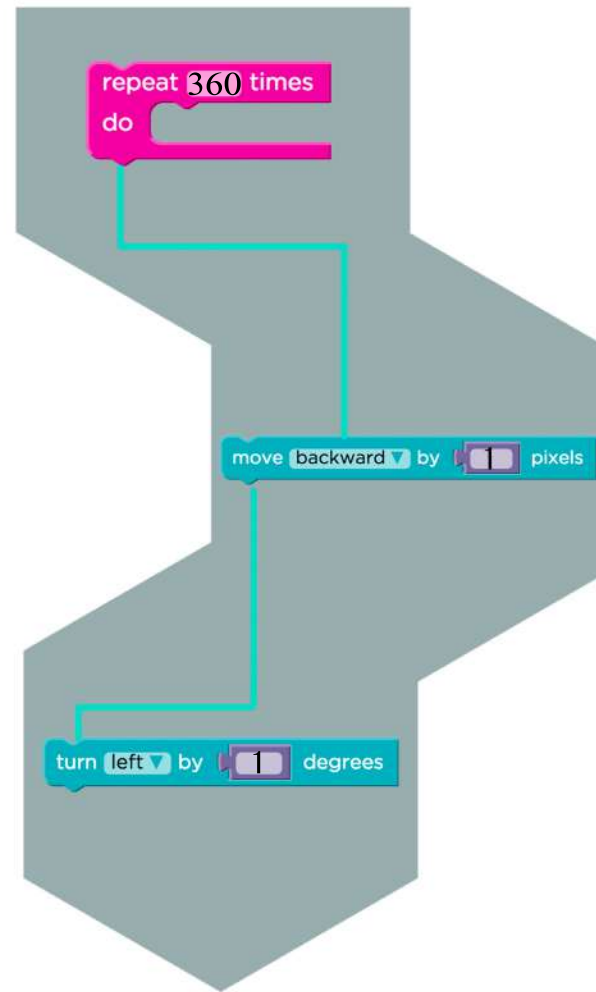
set color

set color random color

repeat ??? times

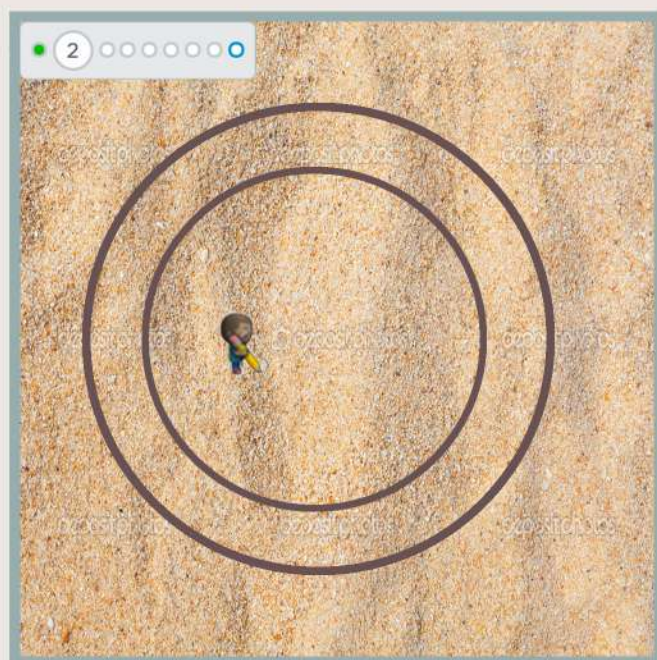
do

STEP 1



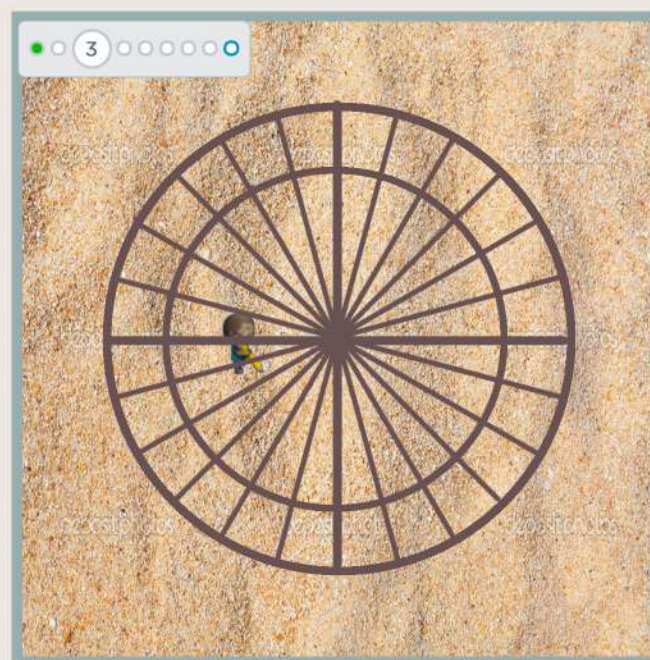
STEP 2

Help the artist draw an inner circle 100 pixels inward.



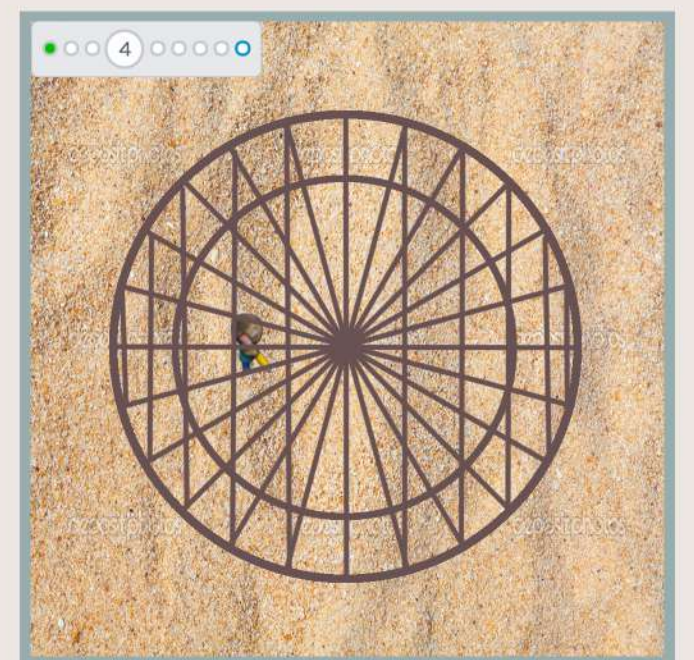
STEP 3

Now draw a 300 pixel long line every 15 degrees starting at the horizontal (0 degree line).



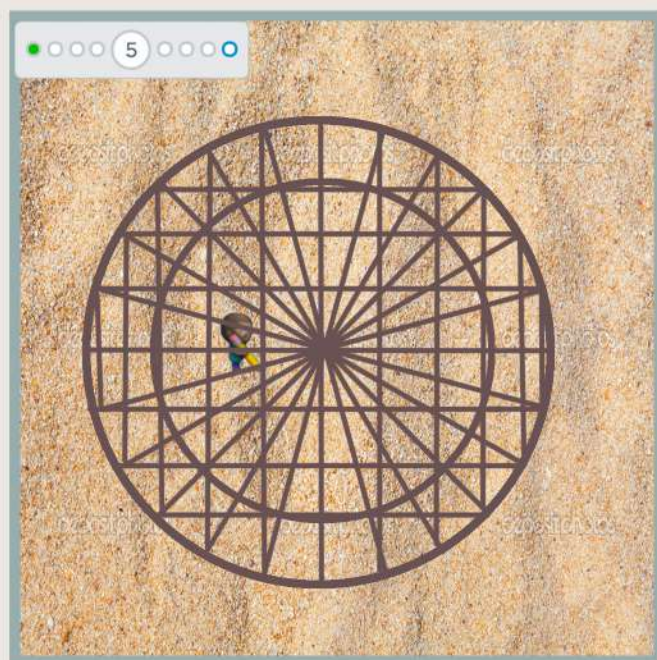
STEP 4

Draw vertical lines at every intersection on the bigger circle.



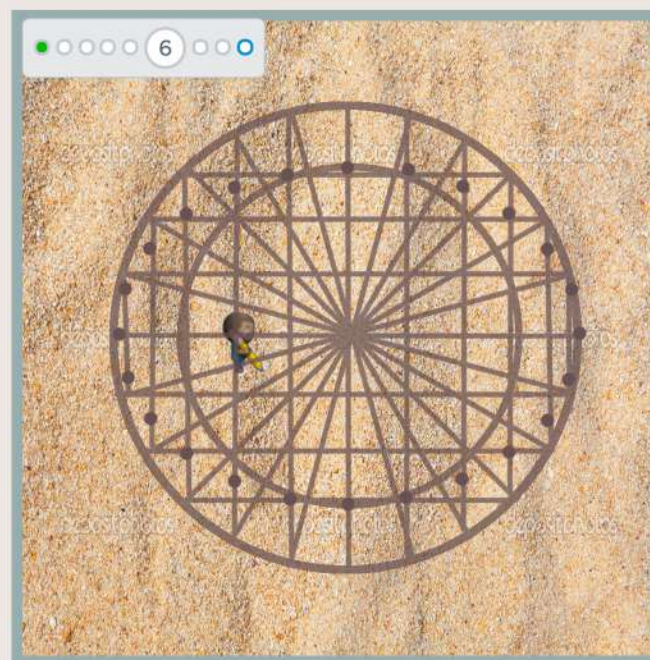
STEP 5

Draw horizontal lines at those intersections.



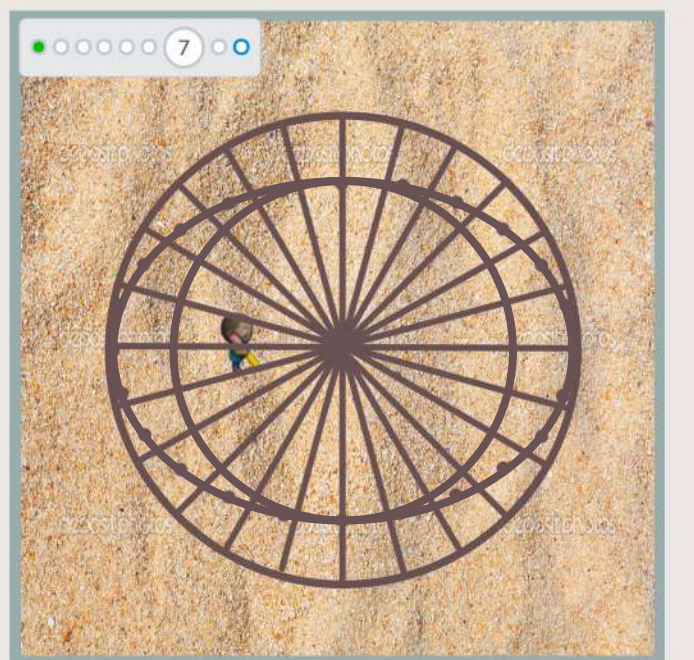
STEP 6

Now plot, within the grid you just created, the outer-most intersections.



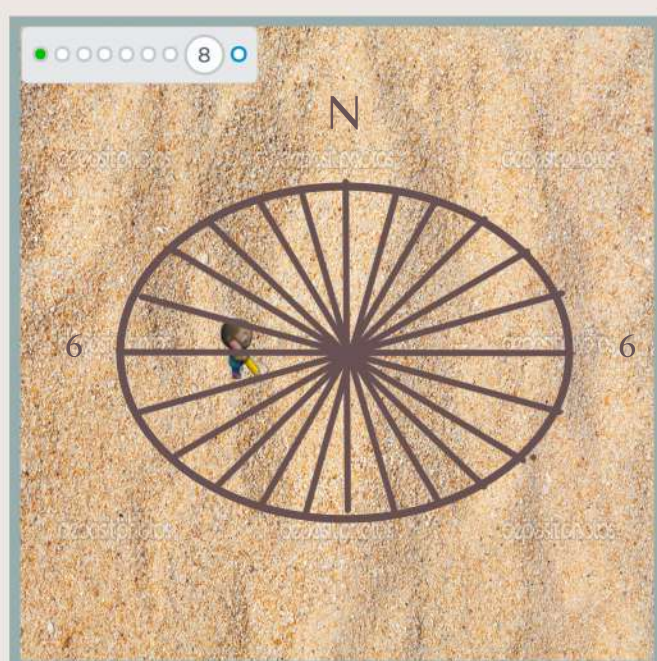
STEP 7

Connect the dots in order to make an ellipse.



STEP 8

Congratulations, you created a sundial. Place where North, 6am and 6pm would be located.



CELEBRATION OF KNOWLEDGE

Play, test, and explore your digital sundial.



FLOOR MODE

Students have the opportunity to build on the floor making it more comfortable and dynamic for students who do well sitting down.

