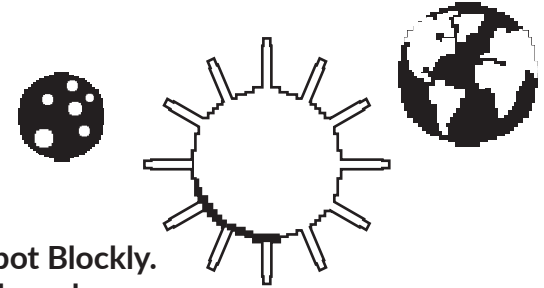


NAME: _____

ROTATION VS. REVOLUTION

In this activity, you will observe the difference between rotation and revolution.



STEPS

1. Choose a model of an inner, rocky planet and put it on top of your bot.
2. Type the URL for the planet you chose into your browser or use the Share Code in Ozobot Blockly.
3. Turn on your bot and place it in the dotted circle for your planet along the path on the board.
4. Connect your bot in Ozobot Blockly and click, "Run Program."
5. First, the planet demonstrates a rotation. Next, the planet demonstrates a revolution.
6. Repeat steps 1-5 for the other inner, rocky planets.

MERCURY

```
repeat 59 times
do
  rotate angle: 6 deg speed: 5 mm/s
set line-following speed: 127 mm/s
follow line to next intersection or line end
```

<https://ozo.bot/b/5ithu6>
or
Share Code: 5ithu6
Use Path 1
(inner path closest to the Sun)

VENUS

```
repeat 127 times
do
  rotate angle: -3 deg speed: 2 mm/s
set line-following speed: 42 mm/s
follow line to next intersection or line end
```

<https://ozo.bot/b/23uevv>
or
Share Code: 23uevv
Use Path 2
(second path from the Sun)

EARTH

```
repeat 24 times
do
  rotate angle: 15 deg speed: 10 mm/s
set line-following speed: 30 mm/s
follow line to next intersection or line end
```

<https://ozo.bot/b/5kbp7t>
or
Share Code: 5kbp7t
Use Path 3
(third path from the Sun)

MARS

```
repeat 25 times
do
  rotate angle: 14 deg speed: 9 mm/s
set line-following speed: 15 mm/s
follow line to next intersection or line end
```

<https://ozo.bot/b/tjo9u6>
or
Share Code: tjo9u6
Use Path 4
(fourth path from the Sun)

CONCLUSION

Complete the sentences below:

A rotation is when a planet _____

A revolution is when a planet _____

BONUS: Work with friends to use four different bots to see the inner, rocky planets rotate and revolve at the same time. Which inner, rocky planet rotates the fastest? Which planet rotates the slowest? Which planet revolves the fastest? Which planet revolves the slowest?