Teacher Guide: Code Monsters

https://www.tynker.com/hour-of-code/codemonsters

Time: 30 minutes
Grades: 3+
Difficulty: Intermediate

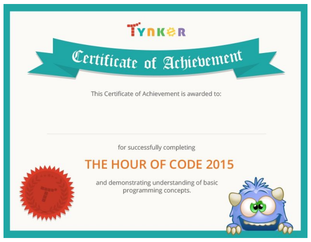
Students complete a set of 21 coding puzzles that introduce them to all the basic coding concepts they need to program their monsters.

Activity Requirements: This activity requires computers with a Web browser and an Internet connection. Headphones recommended.

Programming Activities

Solve 20 Coding Puzzles (30 minutes)

Students solve a set of 21 coding puzzles to learn how to program the monsters that they collect. The first puzzles are very simple and introduce basic concepts. As students progress through the set, they collect new monsters that they can program and the puzzles become more challenging. They learn and apply computational thinking concepts like sequencing and automation. At the end of this activity, students understand basic programming concepts like conditional logic and sequencing.



Tynker

Certificate of Achievement

This Certificate of Achievement is awarded to:

for successfully completing

THE HOUR OF CODE 2015

and demonstrating understanding of basic programming concepts.

Hour of Code Certificate

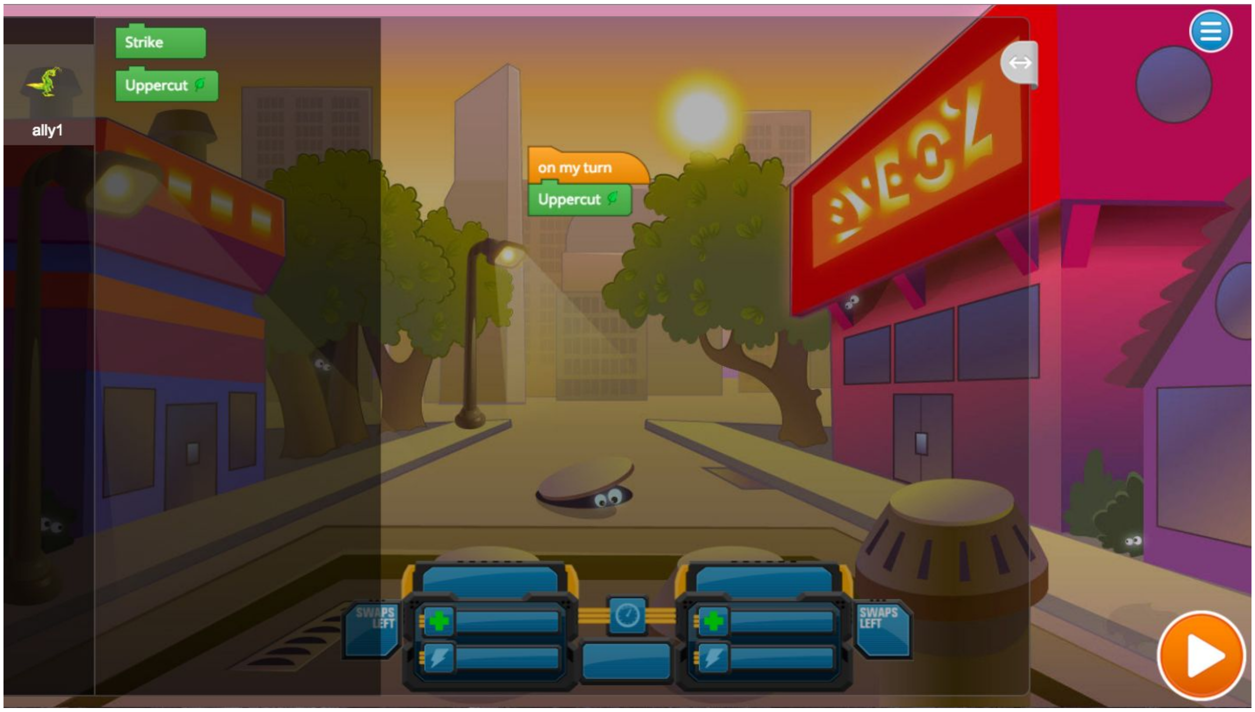
Be sure to download a personalized certificate for your students when they complete this activity.

Standards Mapping

CCSS ELA: RI.3.3, W.3.6, RI.4.5, RI.4.3, RI.5.10, RST.6-8.4, RST.6-8.7, RST.9-10.5, RST.11-12.3
CCSS Math: MP.3.2, MP.3.8, MD.4.5, NF.4.7
CSTA: L1:6.CT.1, L1:6.CPP.5, L1:6.CPP.6, L2:9.CT.1, L2:9.CT.3, L2:9.CT.5, L2:9.CT.12, L2:9.CPP.3, L2:9.CPP.5

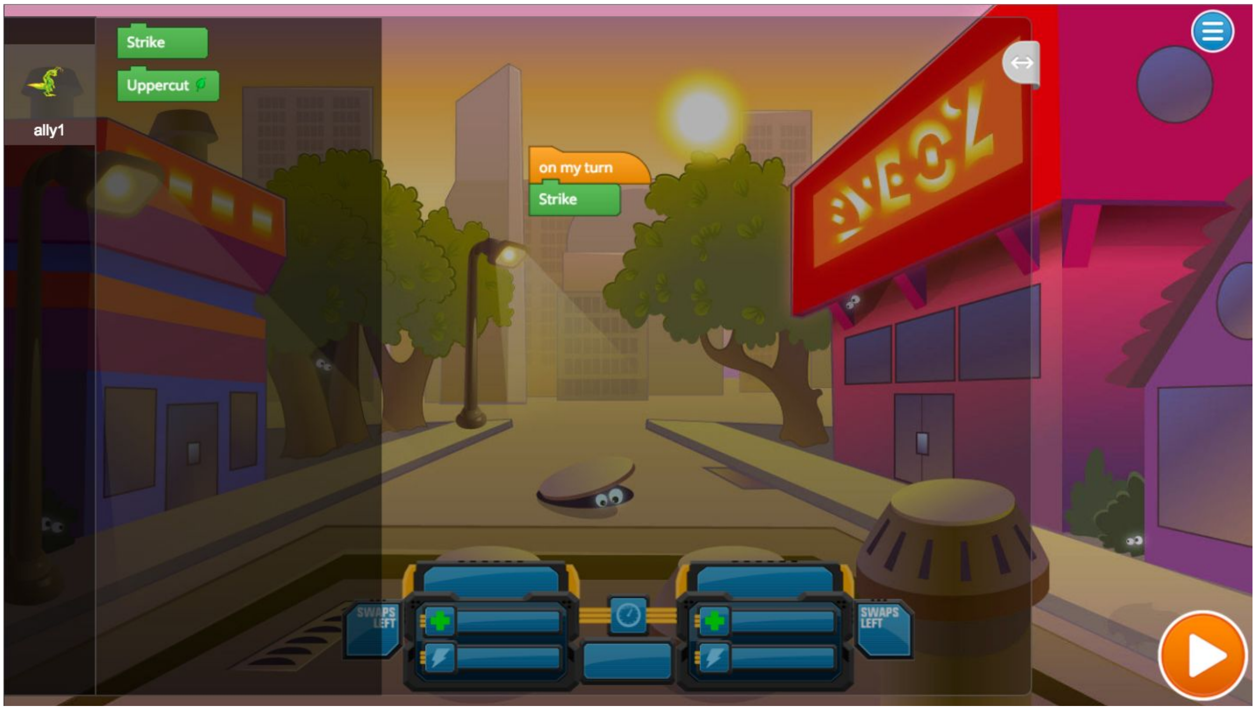
Puzzle Solutions

Puzzle 2



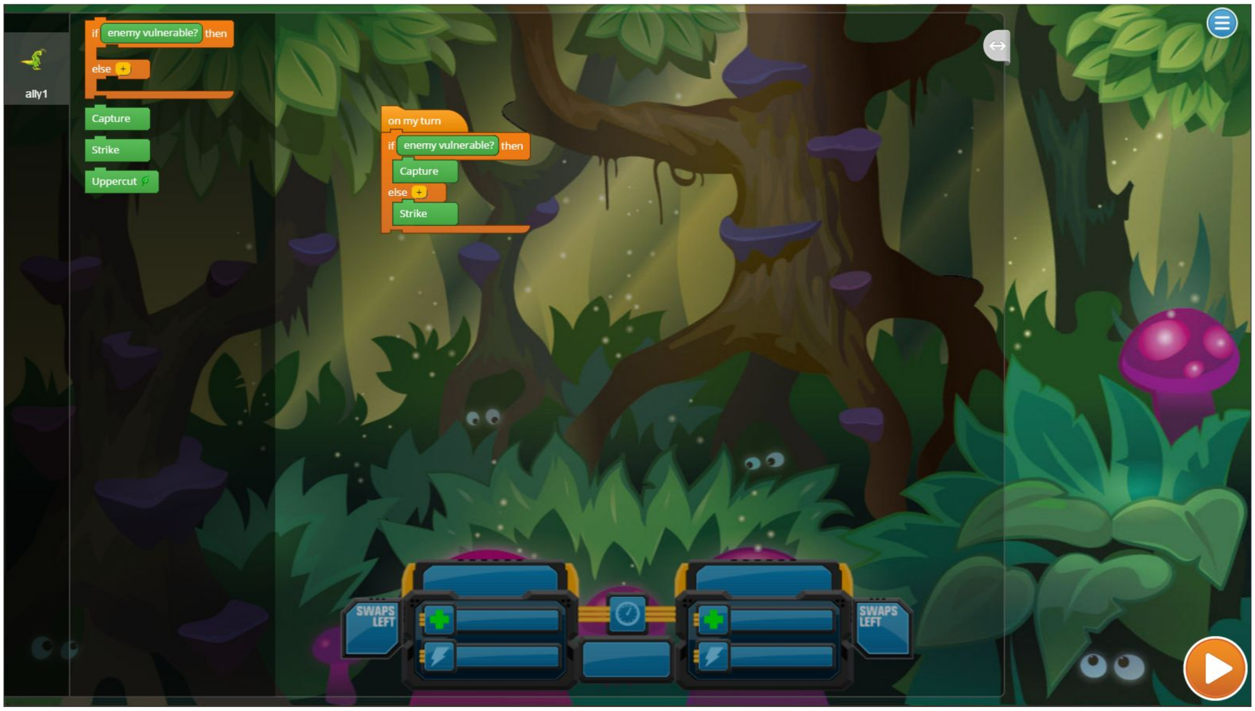
```
on my turn
Uppercut
```

Puzzle 3



```
on my turn
Strike
```

Puzzle 5

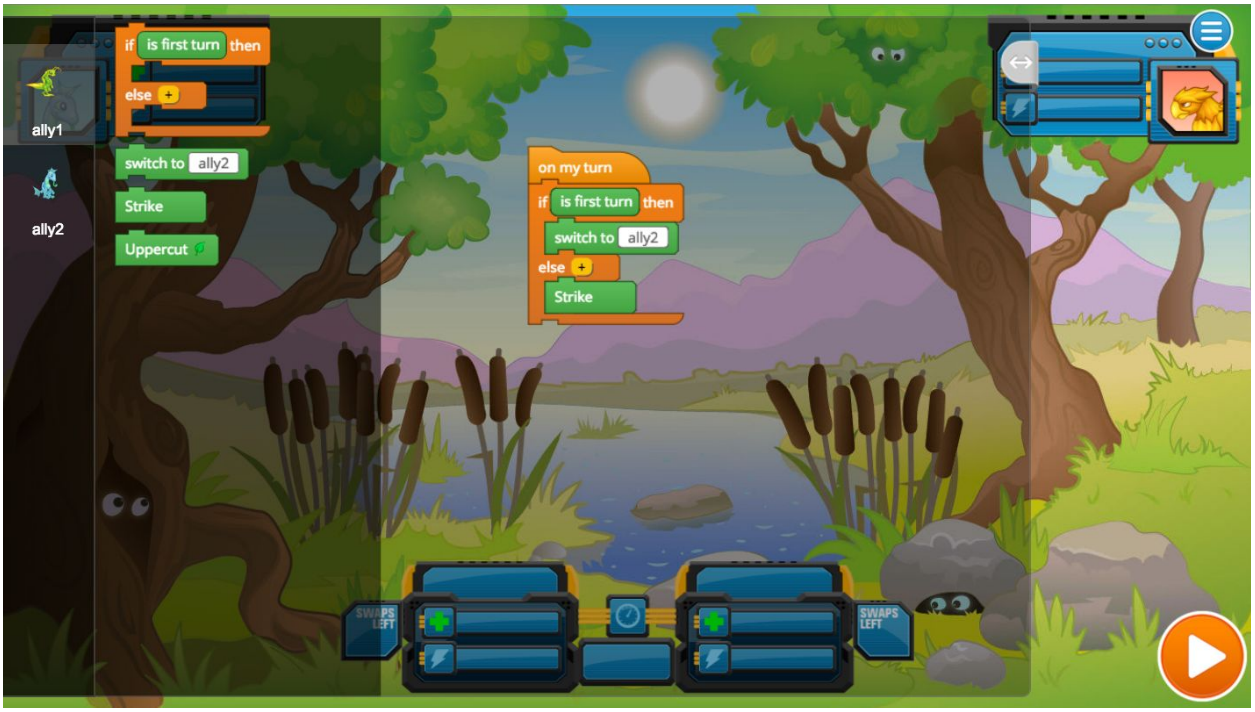


```
if enemy vulnerable? then
else +

Capture
Strike
Uppercut
```

```
on my turn
if enemy vulnerable? then
  Capture
else +
  Strike
```

Puzzle 6

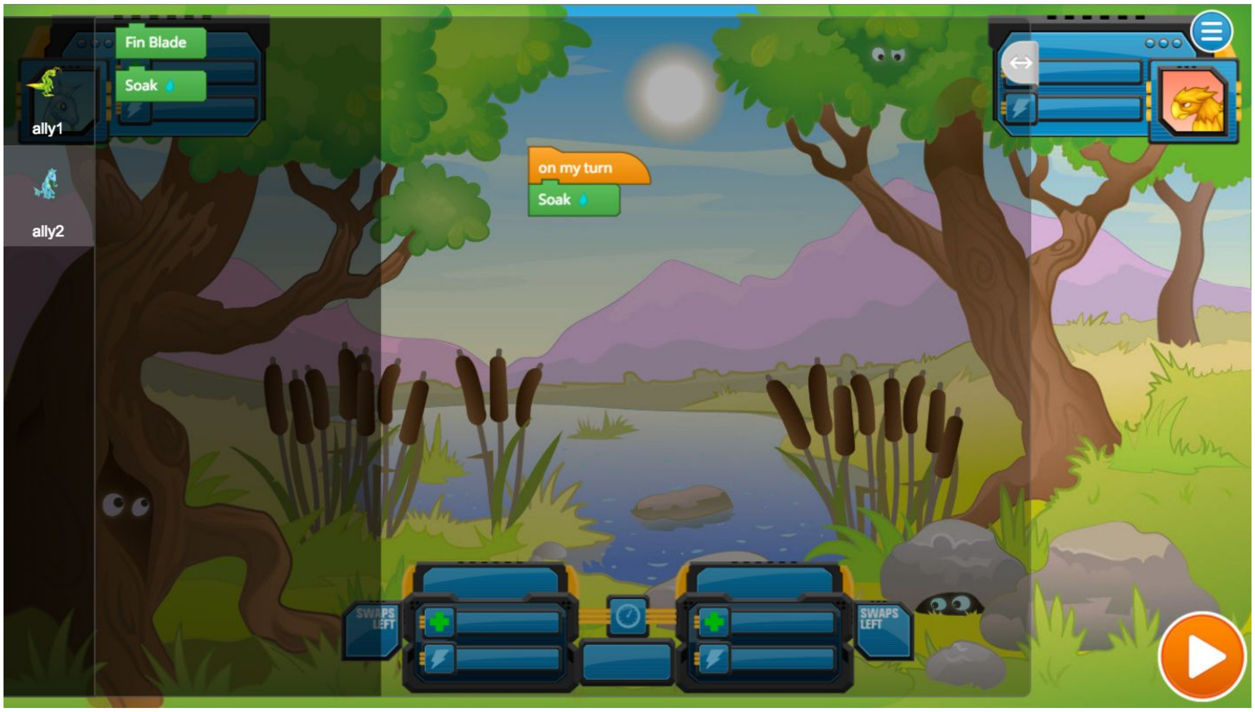


```
if is first turn then
else +

switch to ally2
Strike
Uppercut
```

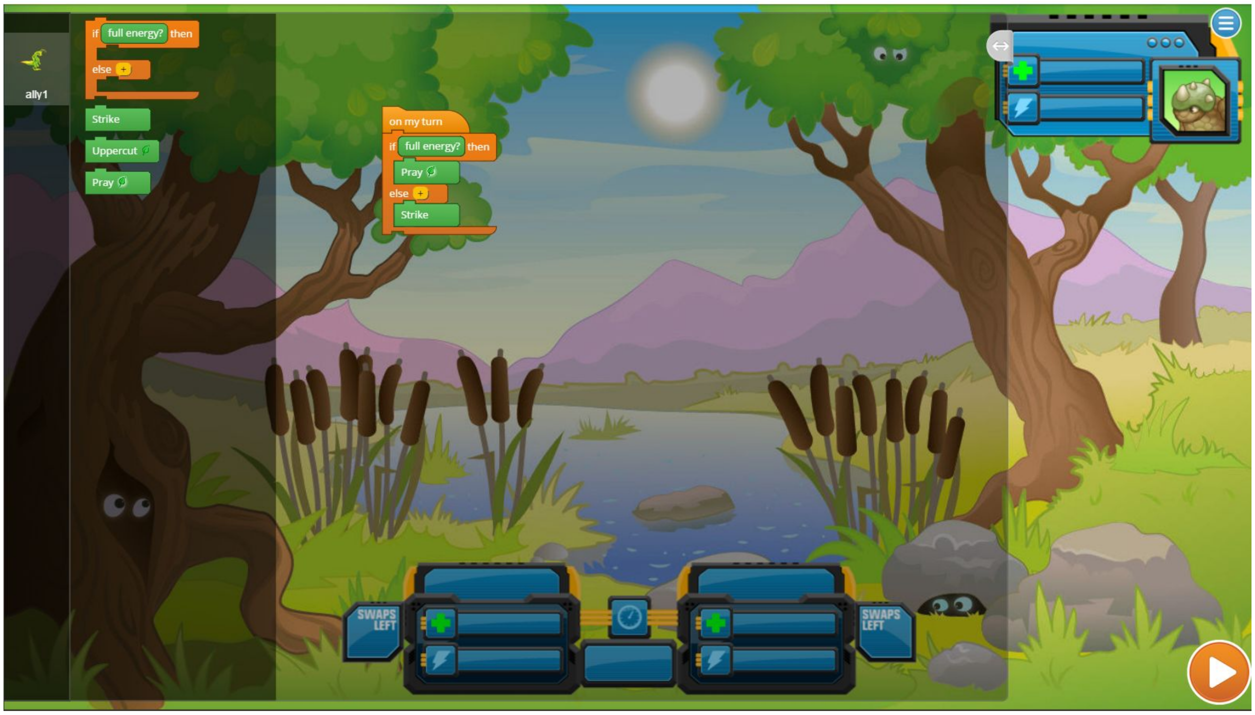
```
on my turn
if is first turn then
  switch to ally2
else +
  Strike
```

Puzzle 6



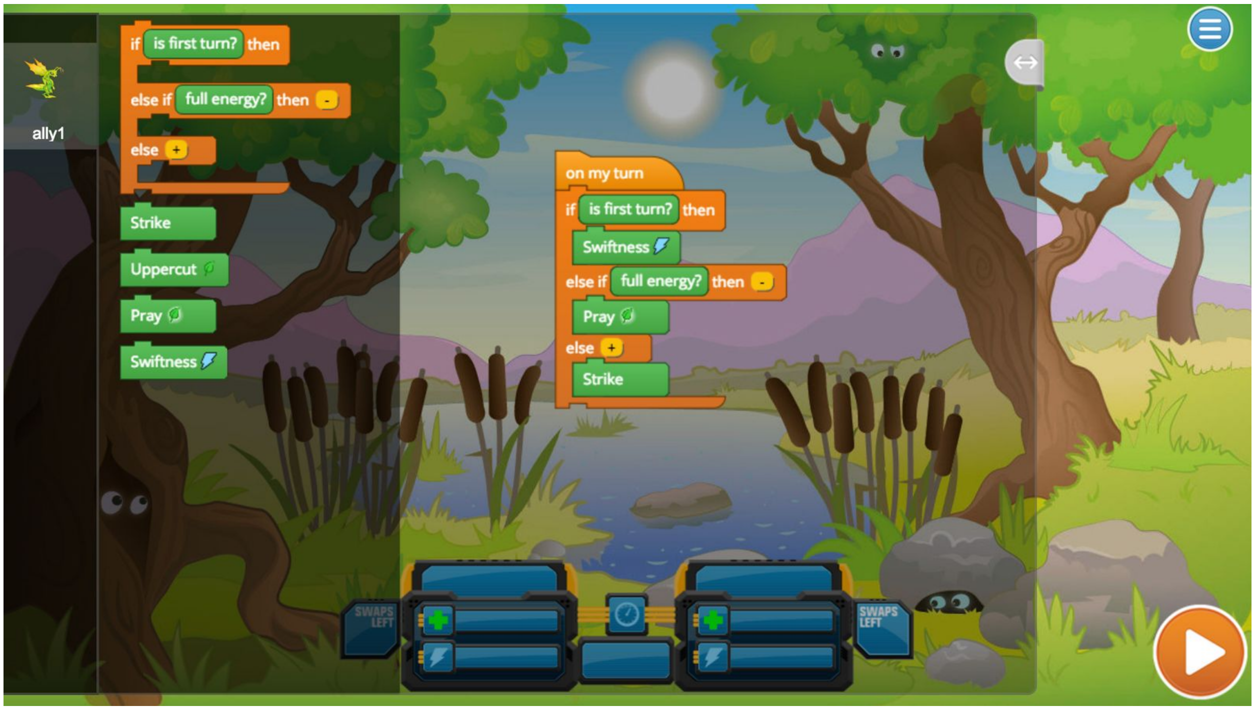
```
on my turn
Soak
```

Puzzle 7



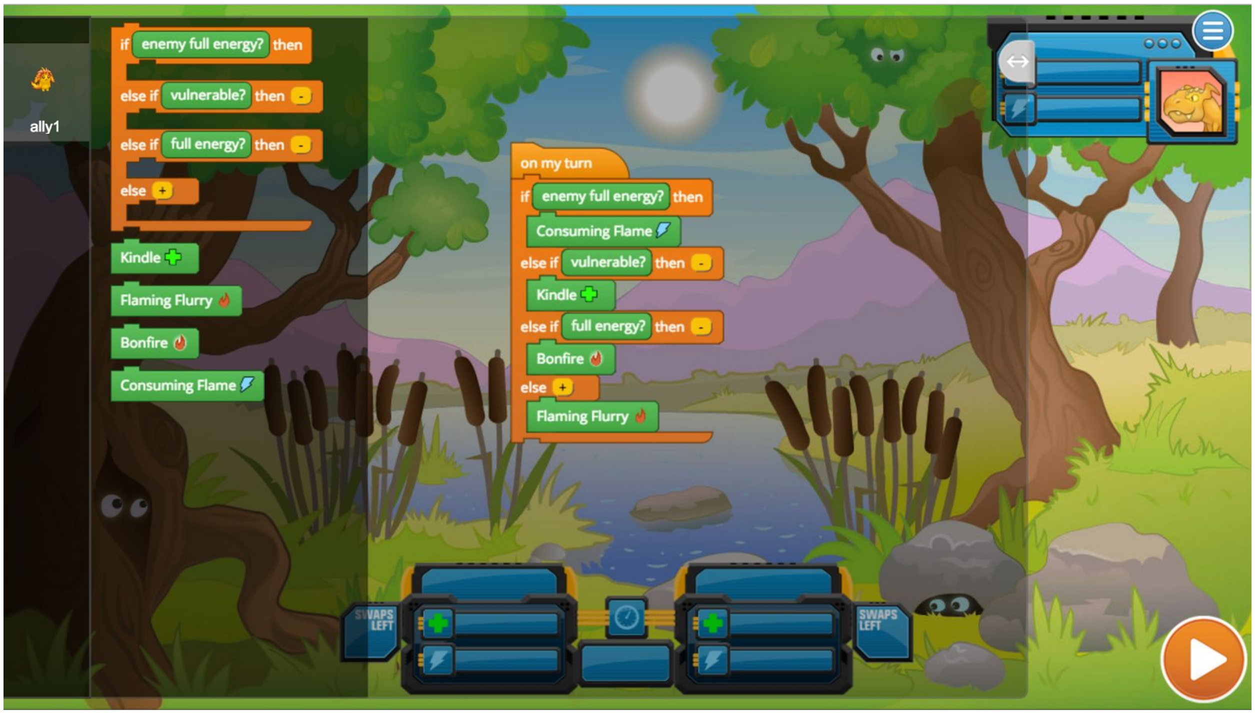
```
on my turn
if full energy? then
    Pray
else
    Strike
```

Puzzle 8



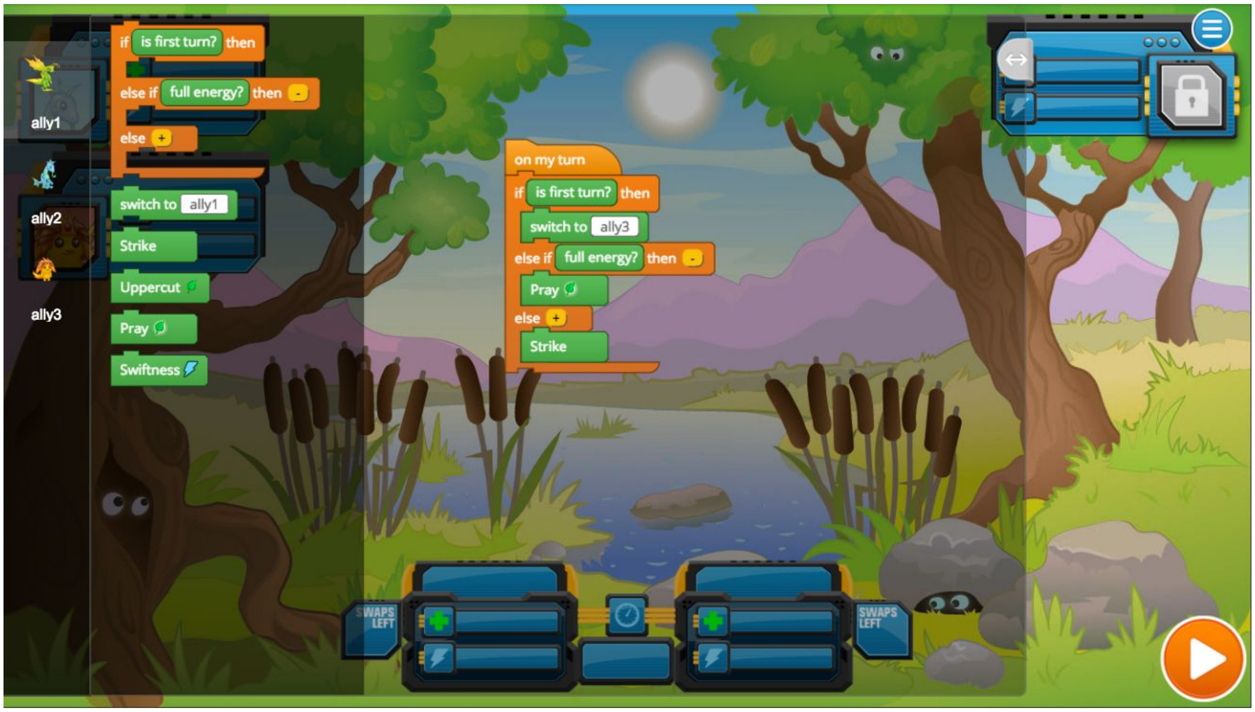
```
on my turn
if is first turn? then
    Swiftness
else if full energy? then
    Pray
else
    Strike
```

Puzzle 9

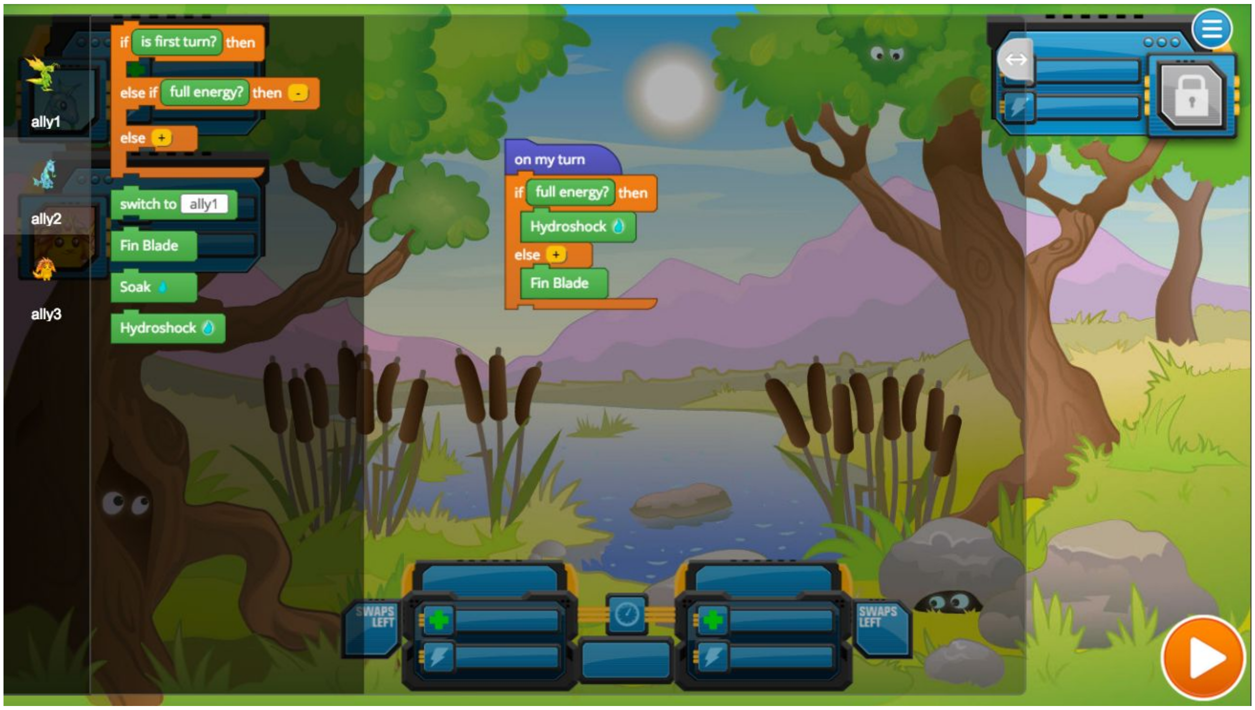


```
on my turn
if enemy full energy? then
    Consuming Flame
else if vulnerable? then
    Kindle
else if full energy? then
    Bonfire
else
    Flaming Flurry
```

Puzzle 10

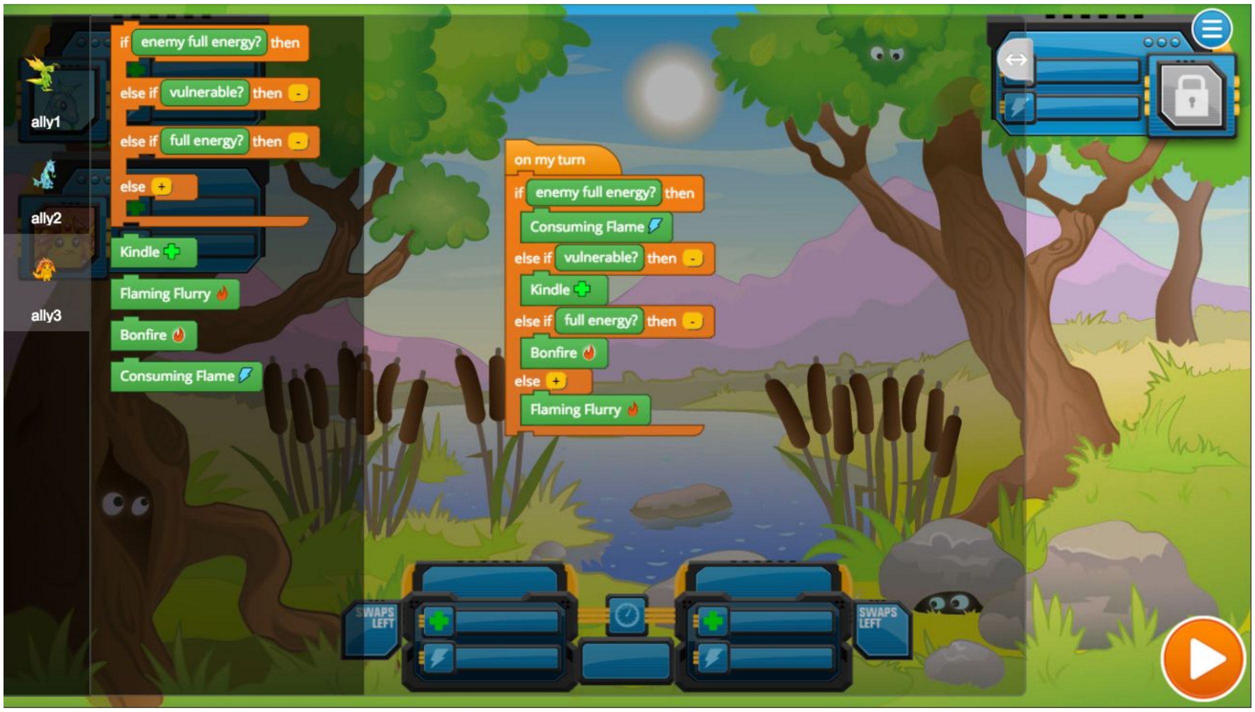


```
on my turn
if is first turn? then
    switch to ally3
else if full energy? then
    Pray
else
    Strike
```



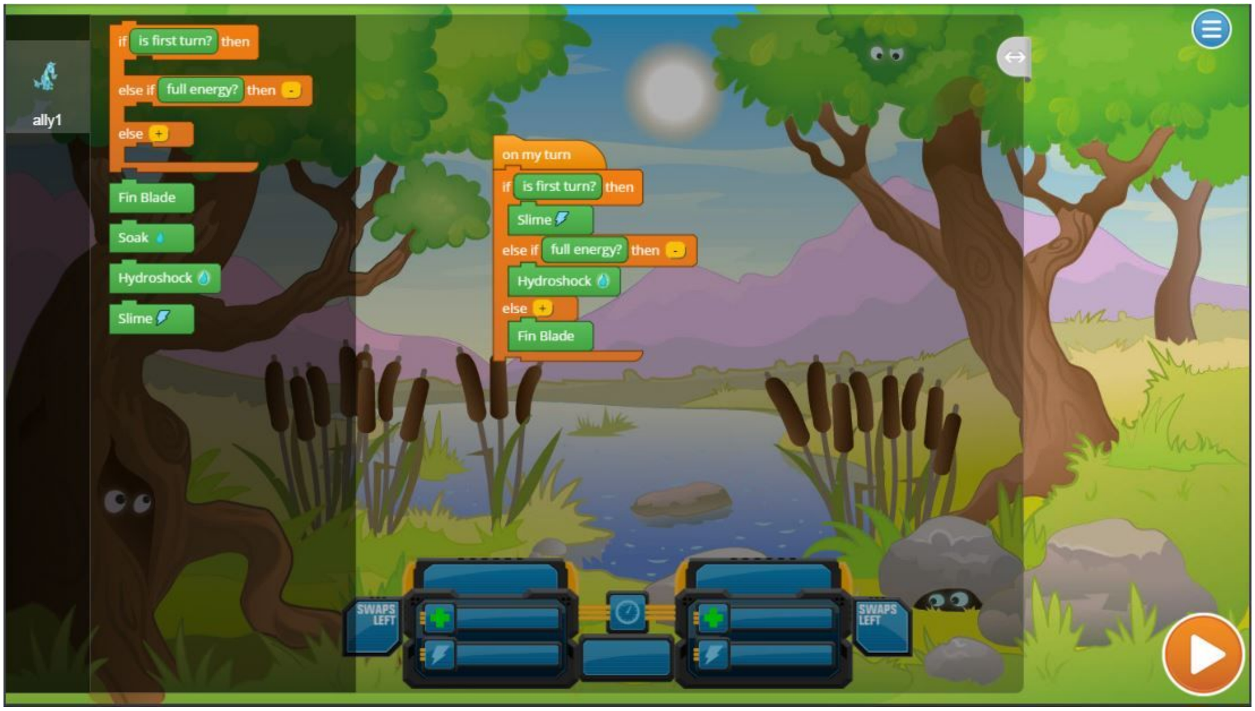
```
on my turn
if full energy? then
    Hydroshock
else
    Fin Blade
```

Puzzle 10 Cont.



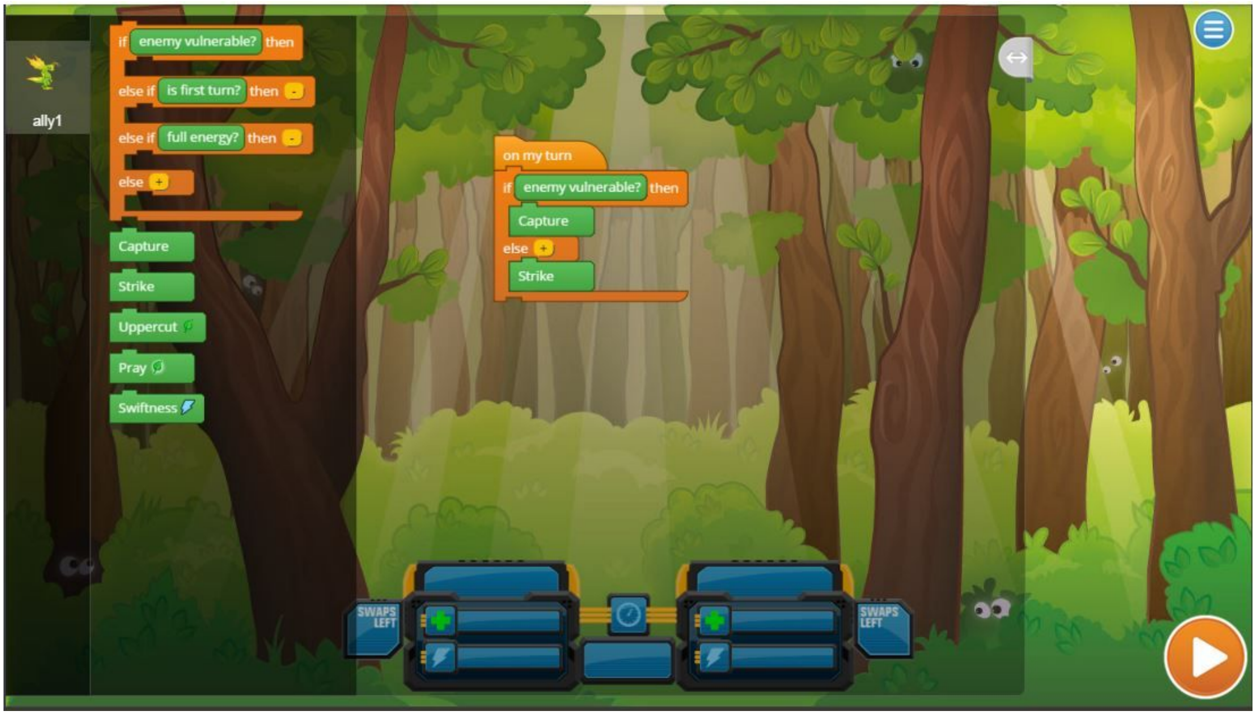
```
on my turn
if enemy full energy? then
    Consuming Flame
else if vulnerable? then
    Kindle
else if full energy? then
    Bonfire
else
    Flaming Flurry
```

Puzzle 11



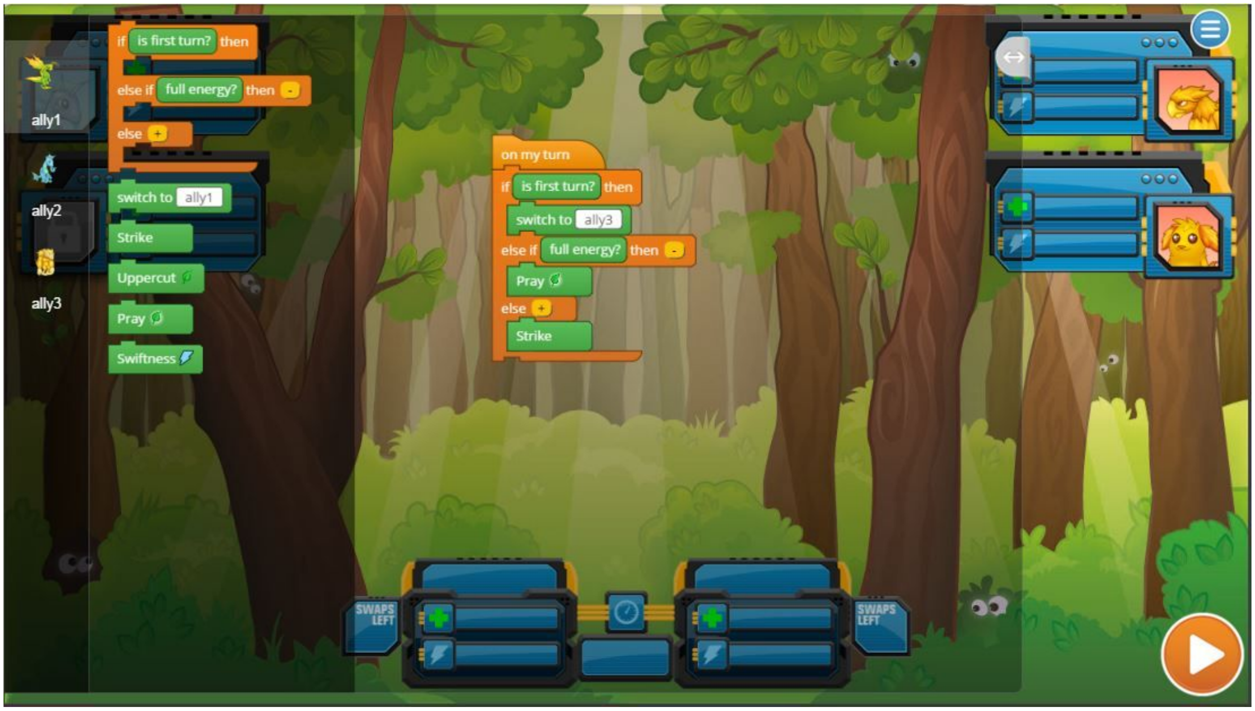
```
on my turn
if is first turn? then
    Slime
else if full energy? then
    Hydroshock
else
    Fin Blade
```

Puzzle 12


ally1
if enemy vulnerable? then
else if is first turn? then
else if full energy? then
else
Capture
Strike
Uppercut
Pray
Swiftness
SWAPS LEFT
SWAPS LEFT

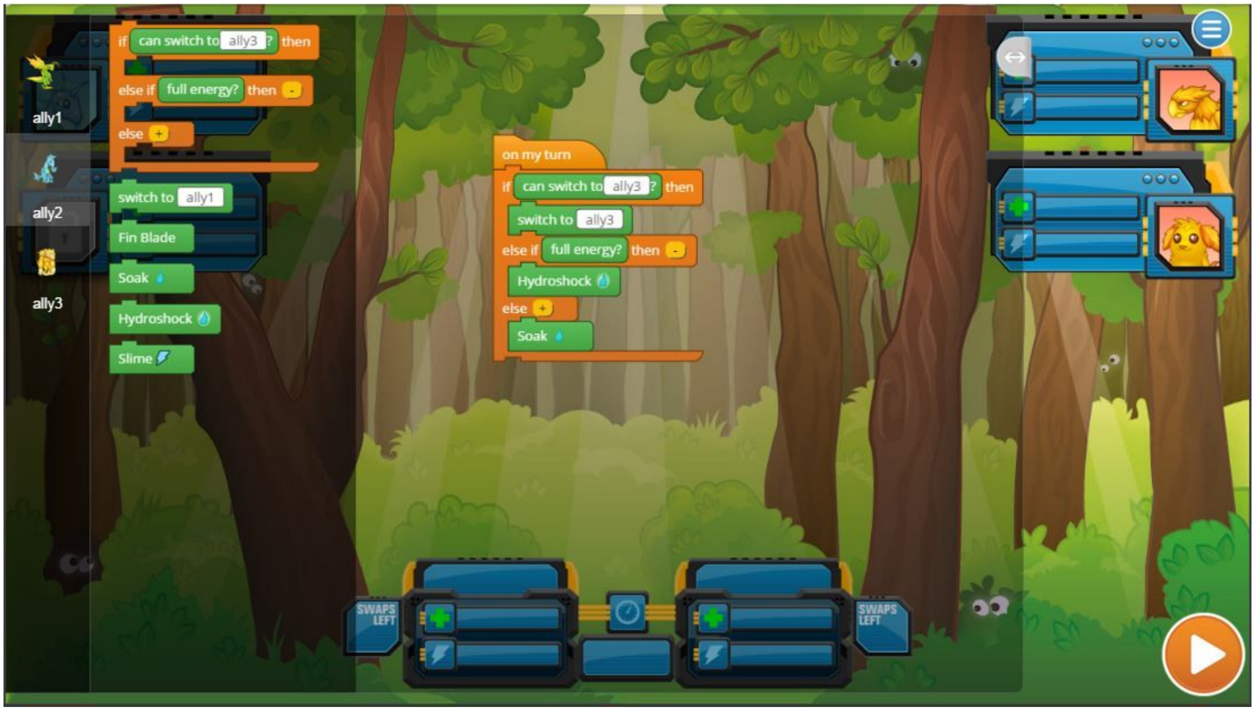
```
on my turn
if enemy vulnerable? then
    Capture
else
    Strike
```

Puzzle 13

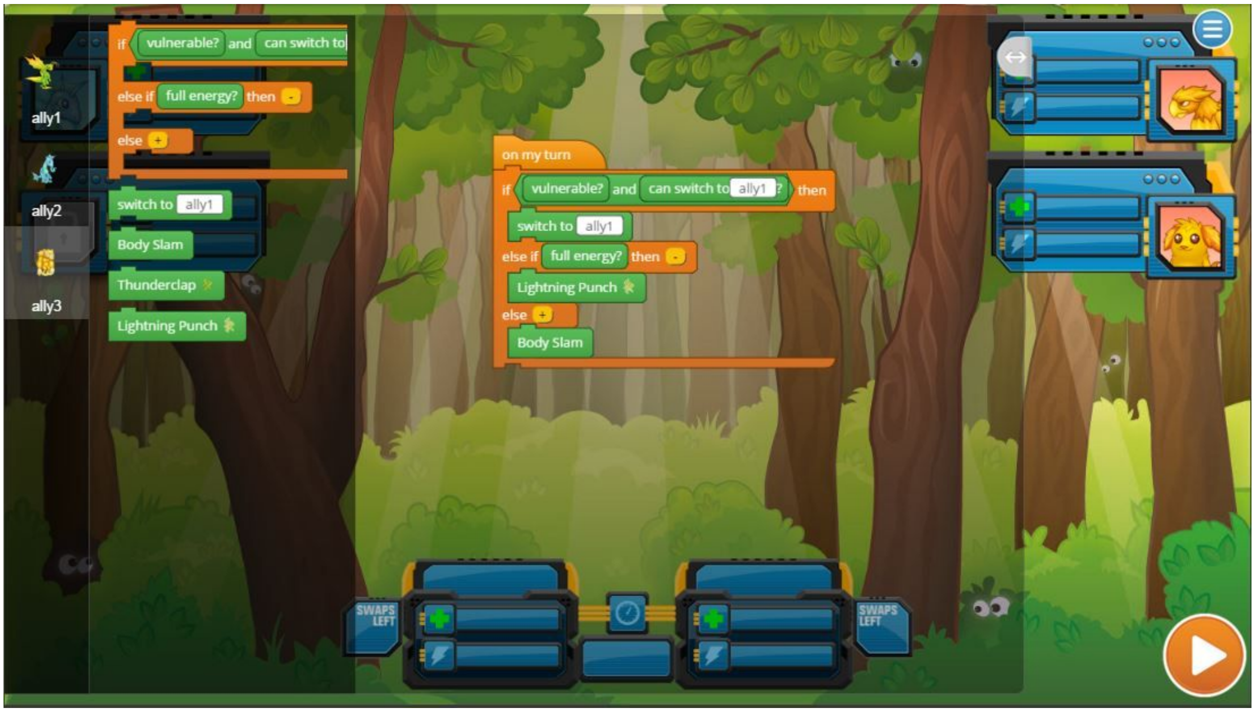


```
on my turn
if is first turn? then
    switch to ally3
else if full energy? then
    Pray
else
    Strike
```

Puzzle 13 Cont.

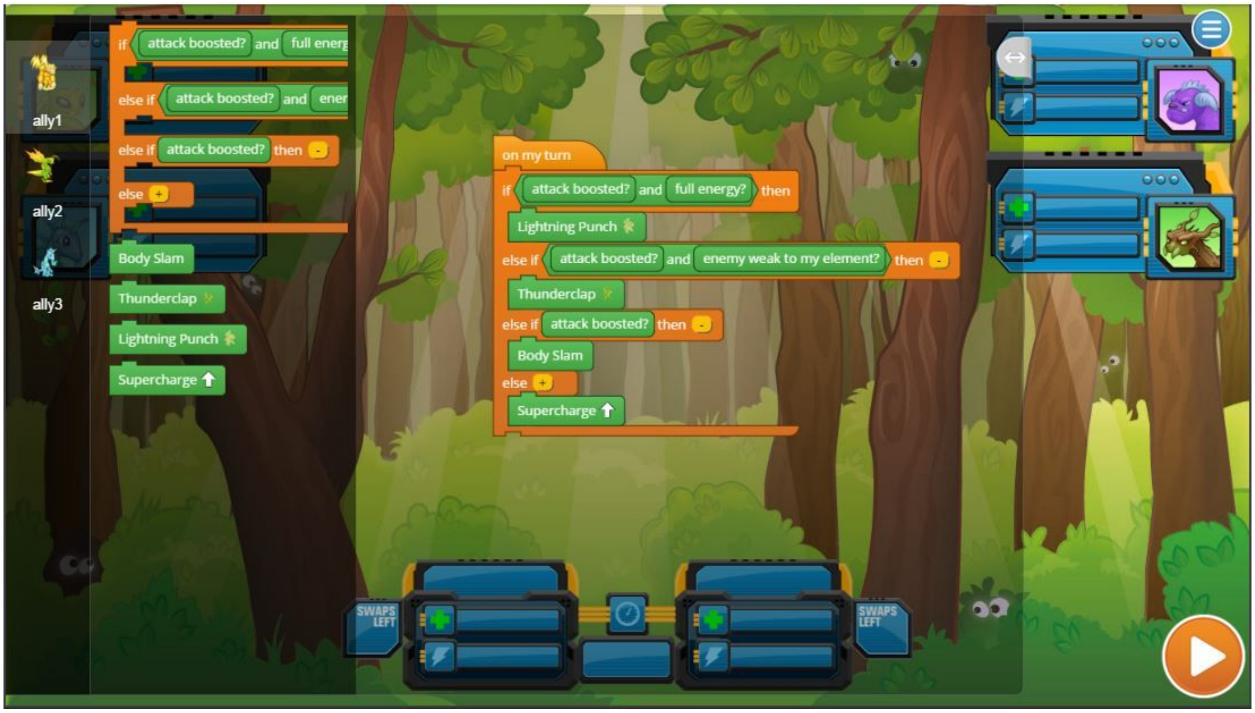


```
on my turn
if can switch to ally3 ? then
    switch to ally3
else if full energy? then
    Hydroshock
else
    Soak
```

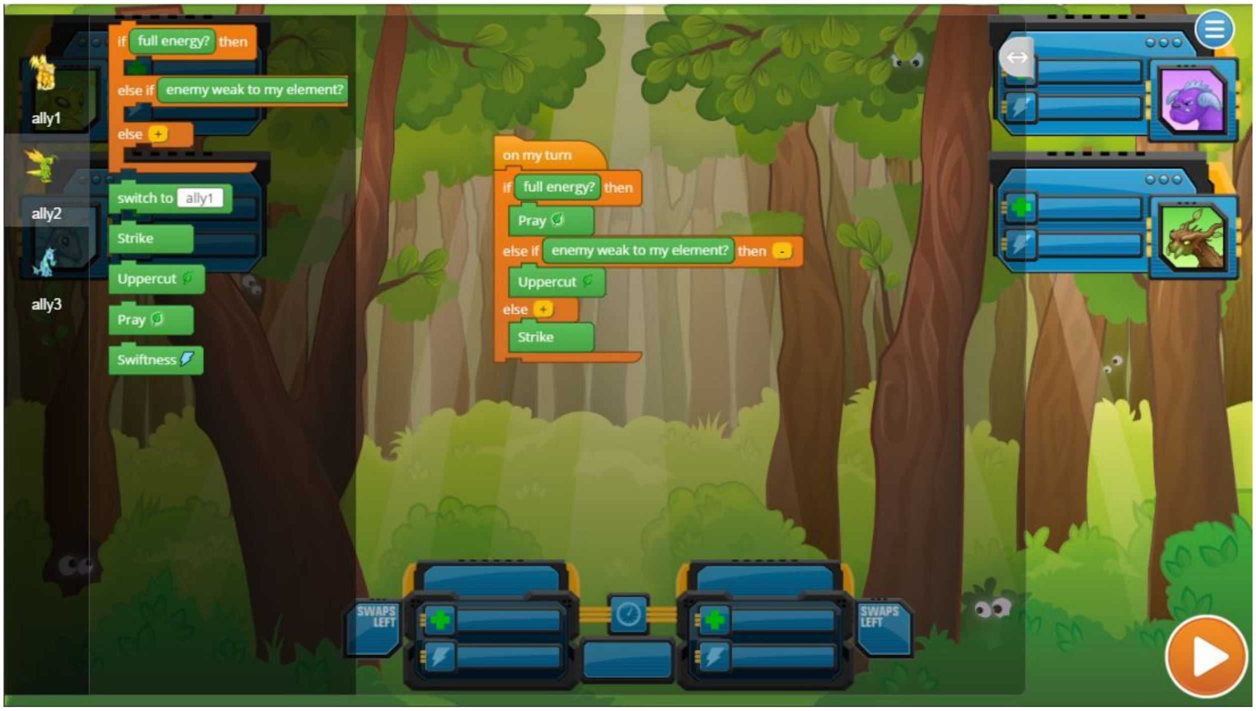


```
on my turn
if vulnerable? and can switch to ally1 ? then
    switch to ally1
else if full energy? then
    Lightning Punch
else
    Body Slam
```

Puzzle 14

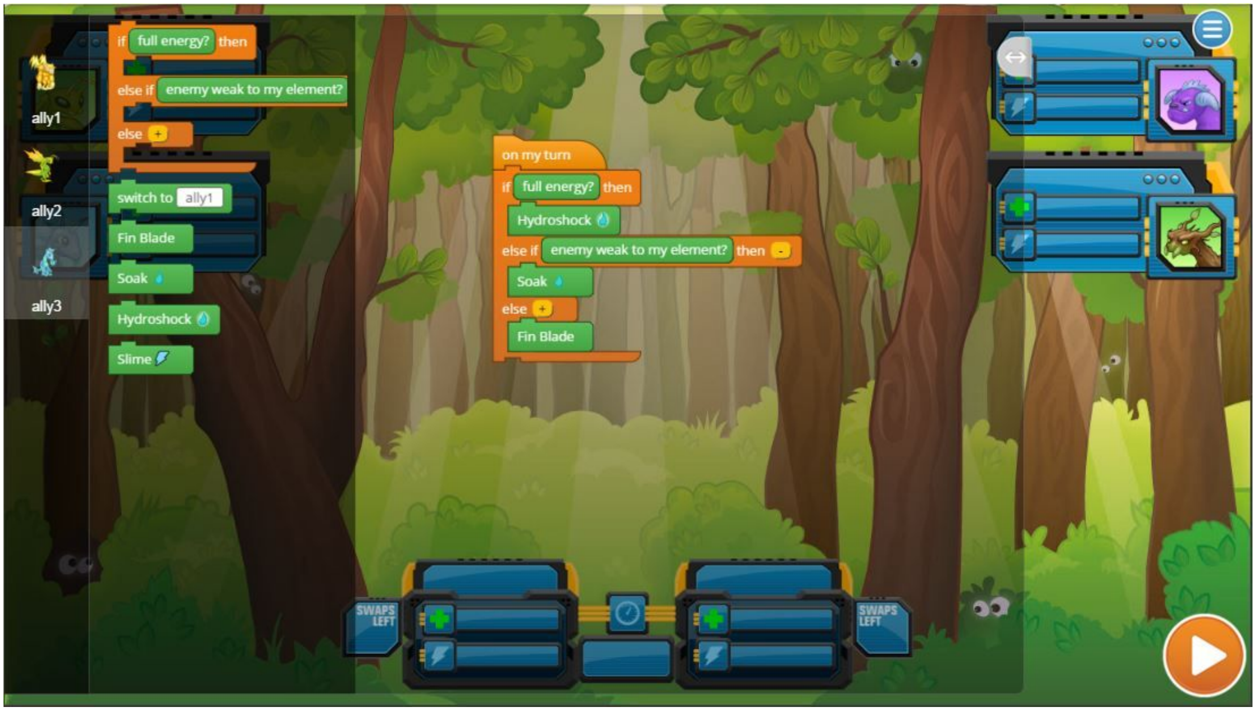

ally1
ally2
ally3
if attack boosted? and full energ
else if attack boosted? and ener
else if attack boosted? then
else
Body Slam
Thunderclap
Lightning Punch
Supercharge
SWAPS LEFT
SWAPS LEFT

```
on my turn
if attack boosted? and full energy? then
    Lightning Punch
else if attack boosted? and enemy weak to my element? then
    Thunderclap
else if attack boosted? then
    Body Slam
else
    Supercharge
```



```
on my turn
if full energy? then
    Pray
else if enemy weak to my element? then
    Uppercut
else
    Strike
```

Puzzle 14 Cont.

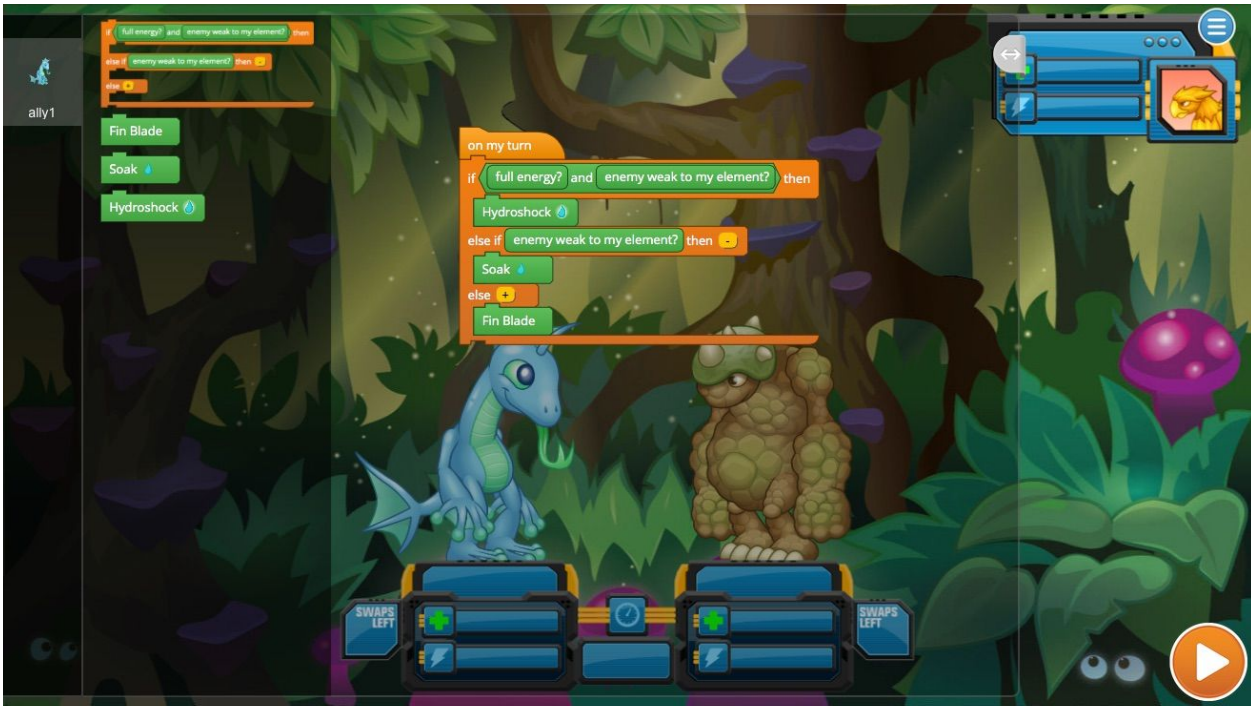


```
if full energy? then
else if enemy weak to my element?
else +

switch to ally1
Fin Blade
Soak
Hydroshock
Slime
```

```
on my turn
if full energy? then
    Hydroshock
else if enemy weak to my element? then -
    Soak
else +
    Fin Blade
```

Puzzle 15

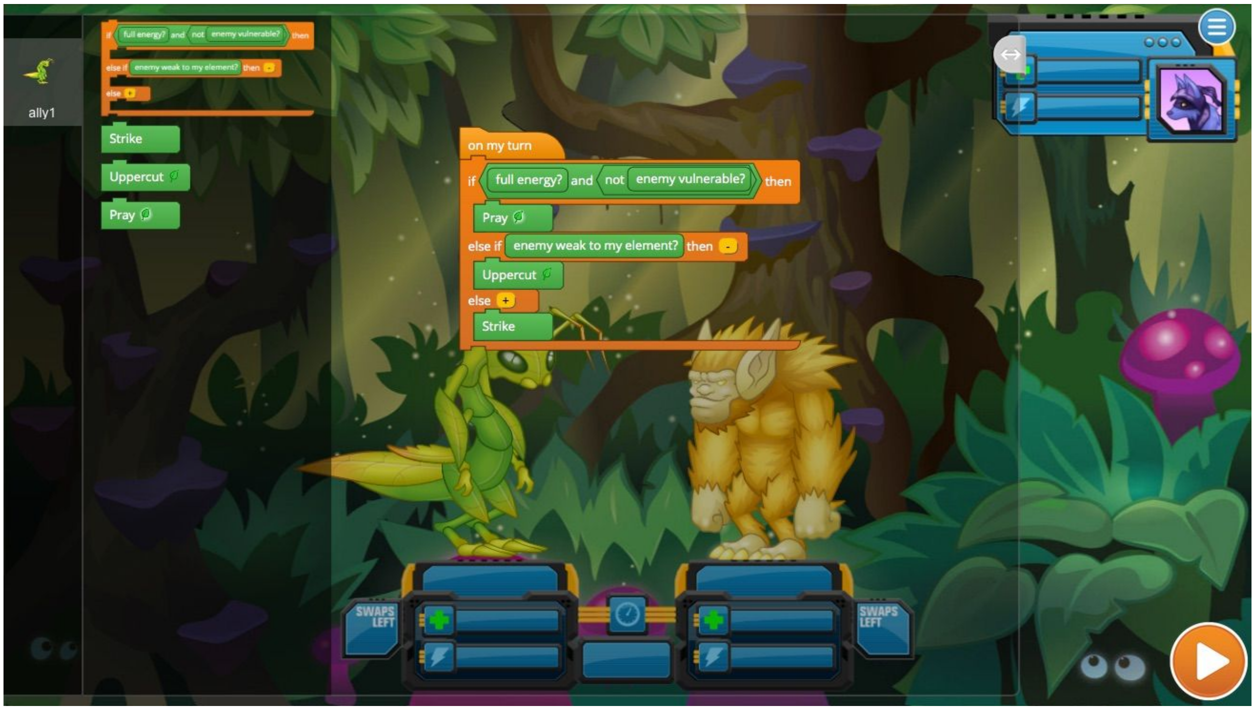


```
if full energy? and enemy weak to my element? then
else if enemy weak to my element? then -
else +

Fin Blade
Soak
Hydroshock
```

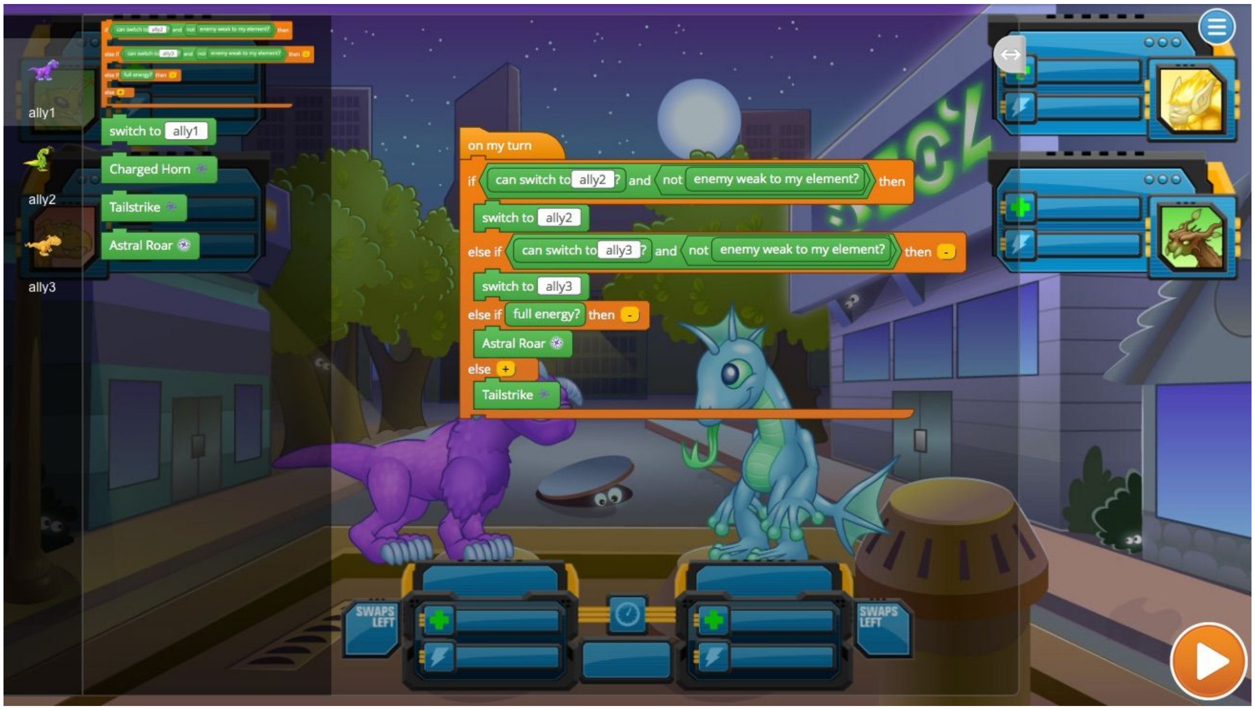
```
on my turn
if full energy? and enemy weak to my element? then
    Hydroshock
else if enemy weak to my element? then -
    Soak
else +
    Fin Blade
```

Puzzle 16



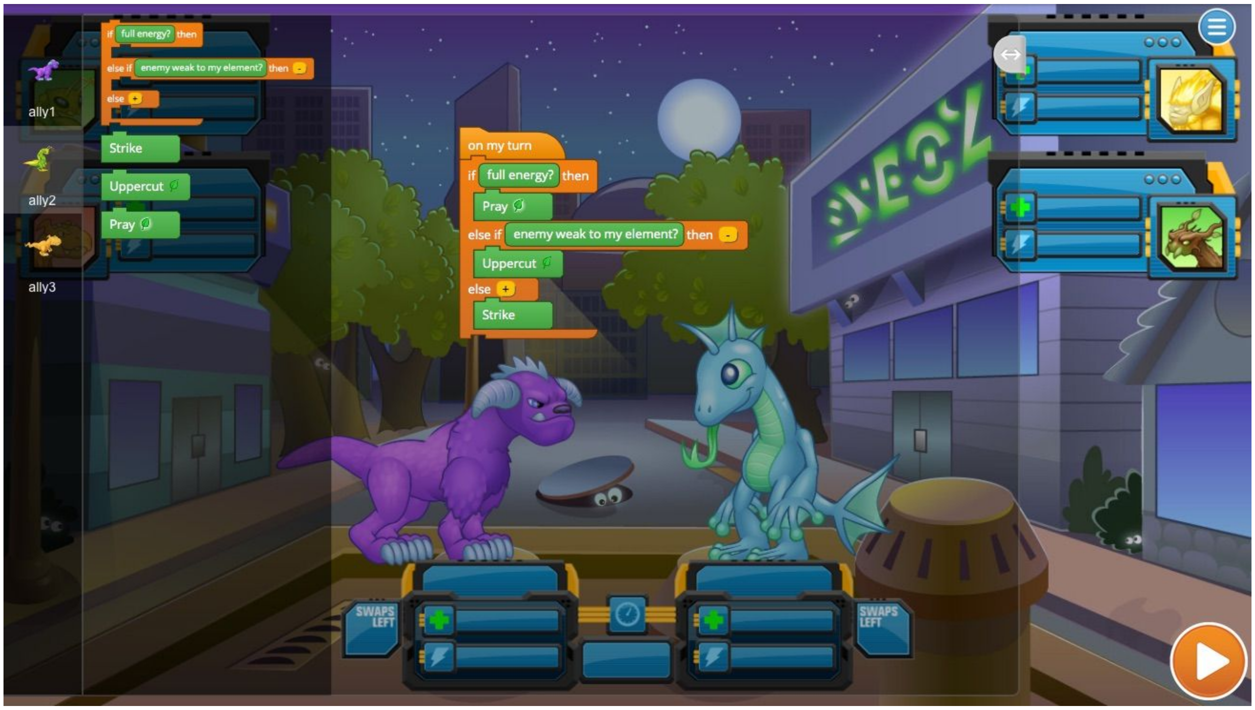
```
on my turn
if full energy? and not enemy vulnerable? then
    Pray
else if enemy weak to my element? then
    Uppercut
else
    Strike
```

Puzzle 17

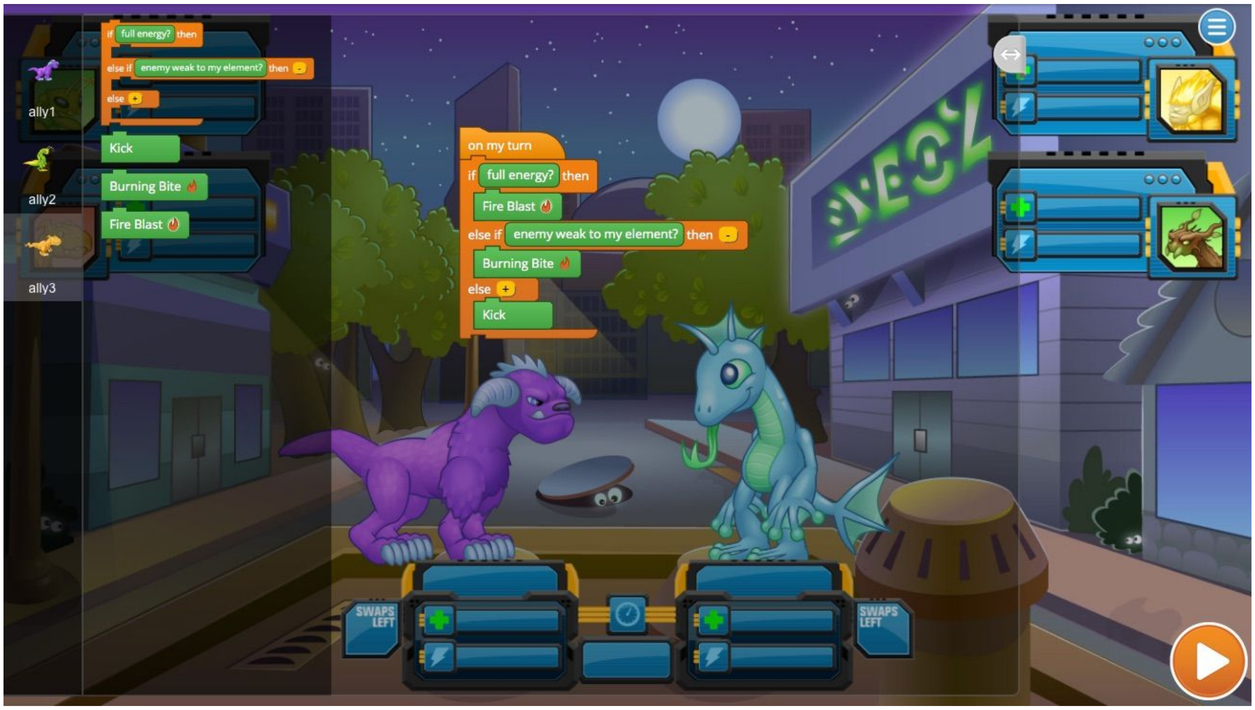


```
on my turn
if can switch to ally2 ? and not enemy weak to my element? then
    switch to ally2
else if can switch to ally3 ? and not enemy weak to my element? then
    switch to ally3
else if full energy? then
    Astral Roar
else
    Tailstrike
```

Puzzle 17 Cont.

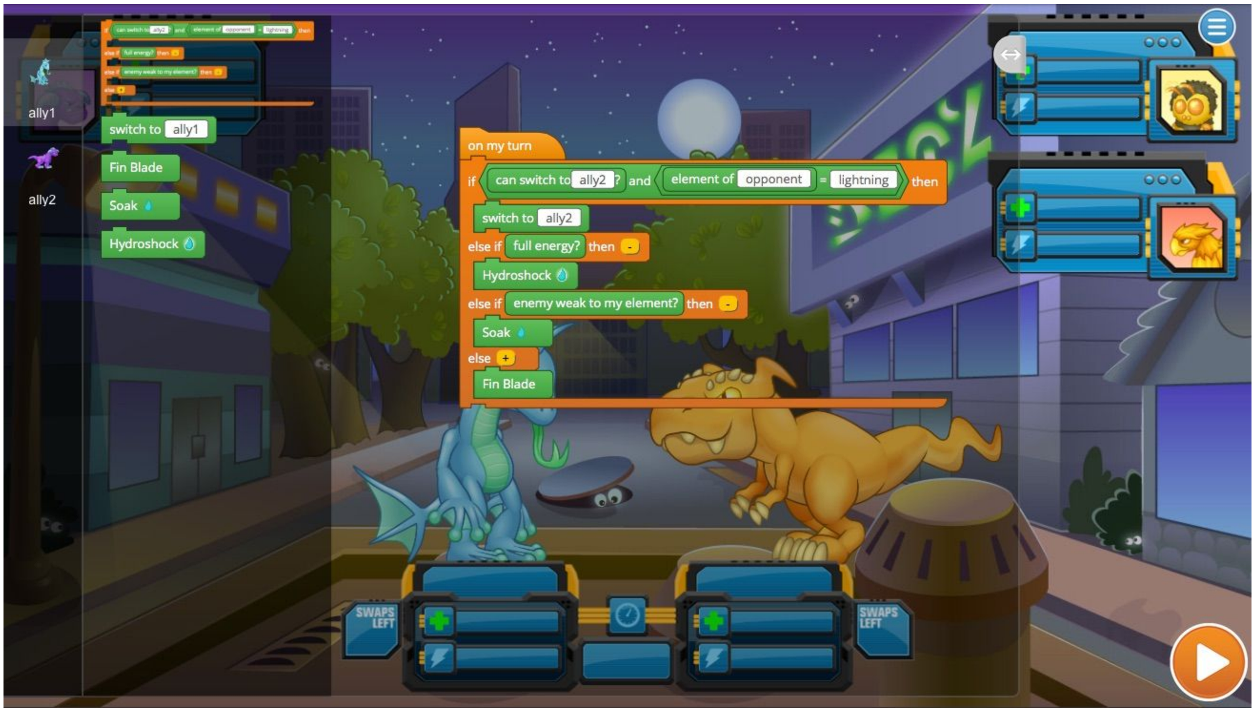


```
on my turn
if full energy? then
    Pray
else if enemy weak to my element? then
    Uppercut
else
    Strike
```

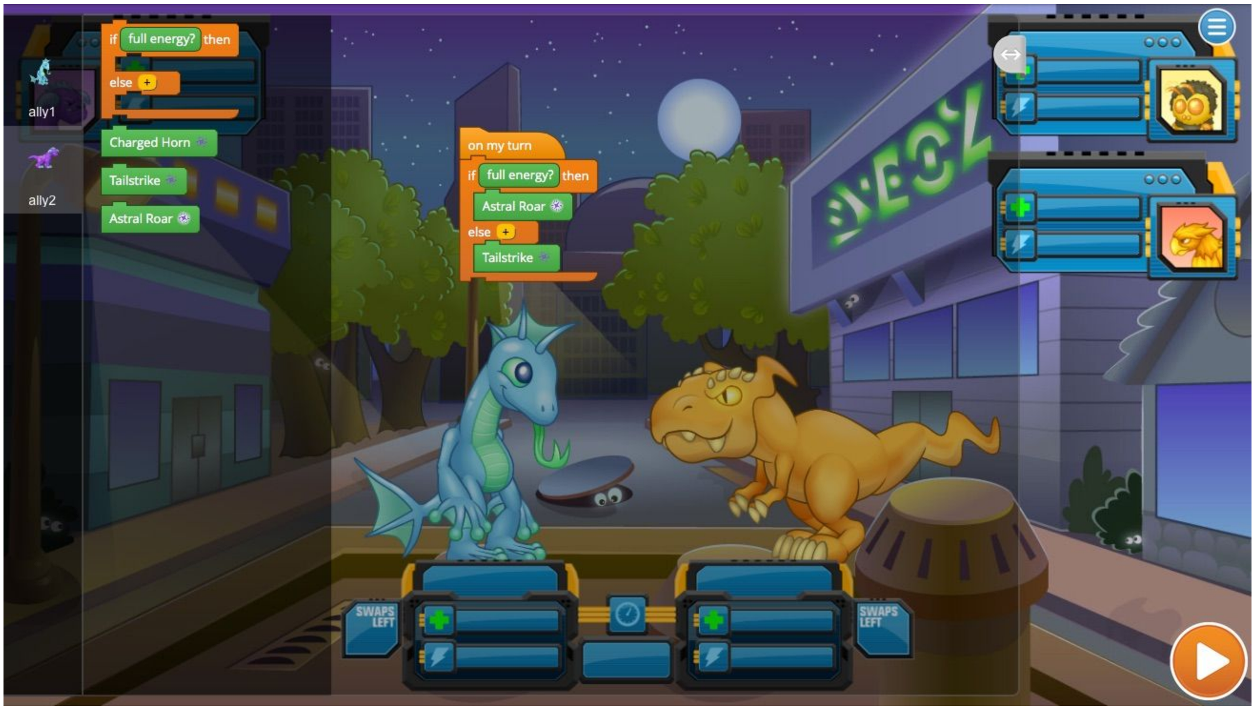


```
on my turn
if full energy? then
    Fire Blast
else if enemy weak to my element? then
    Burning Bite
else
    Kick
```

Puzzle 18

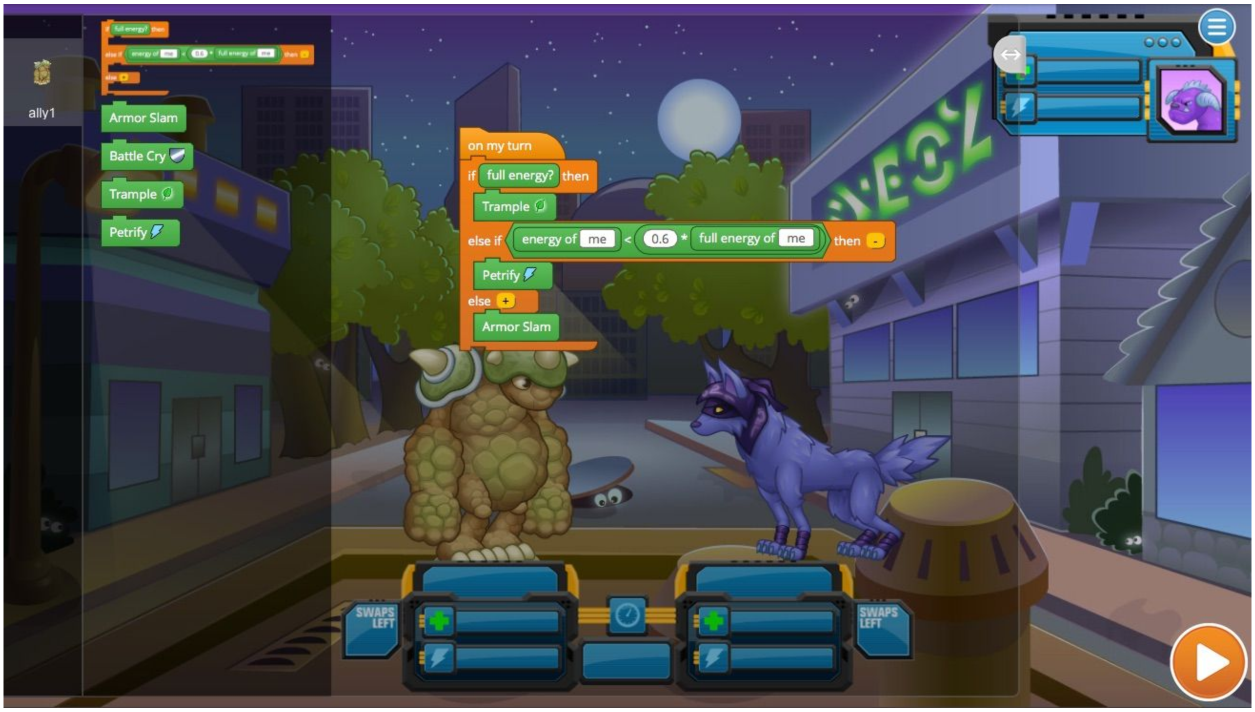


```
on my turn
if can switch to ally2 ? and element of opponent = lightning then
    switch to ally2
else if full energy? then
    Hydroshock
else if enemy weak to my element? then
    Soak
else
    Fin Blade
```



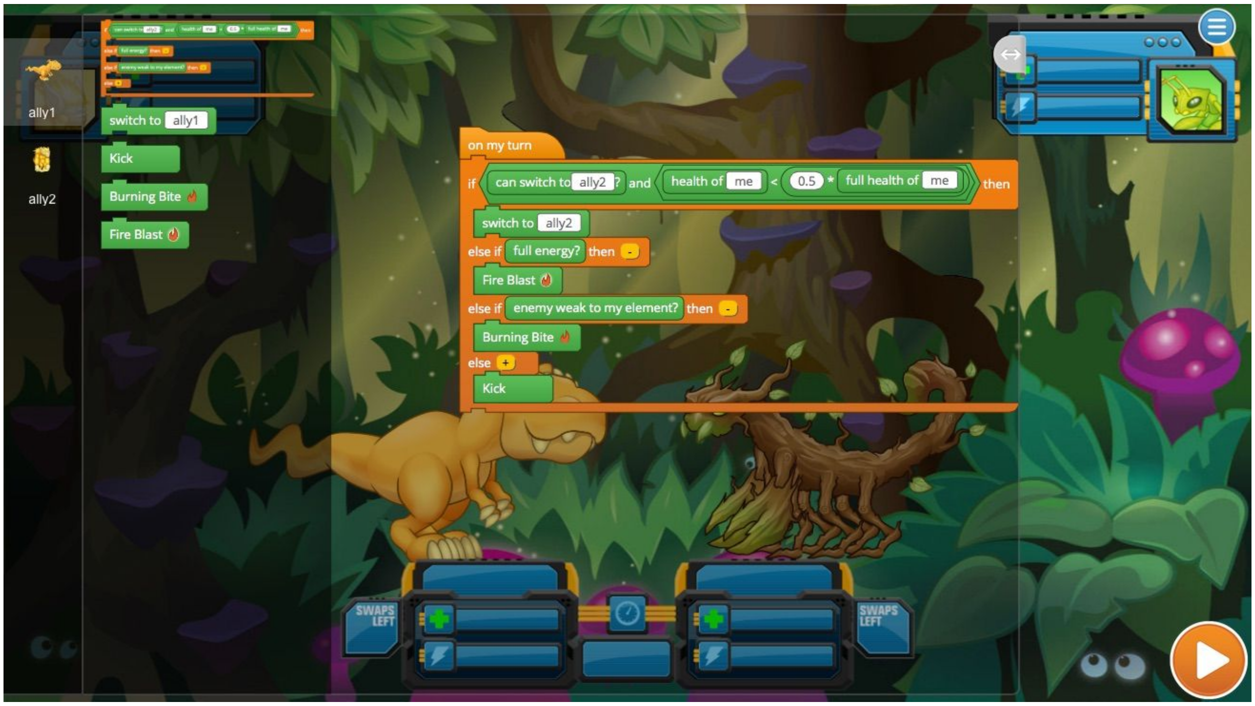
```
on my turn
if full energy? then
    Astral Roar
else
    Tailstrike
```

Puzzle 19



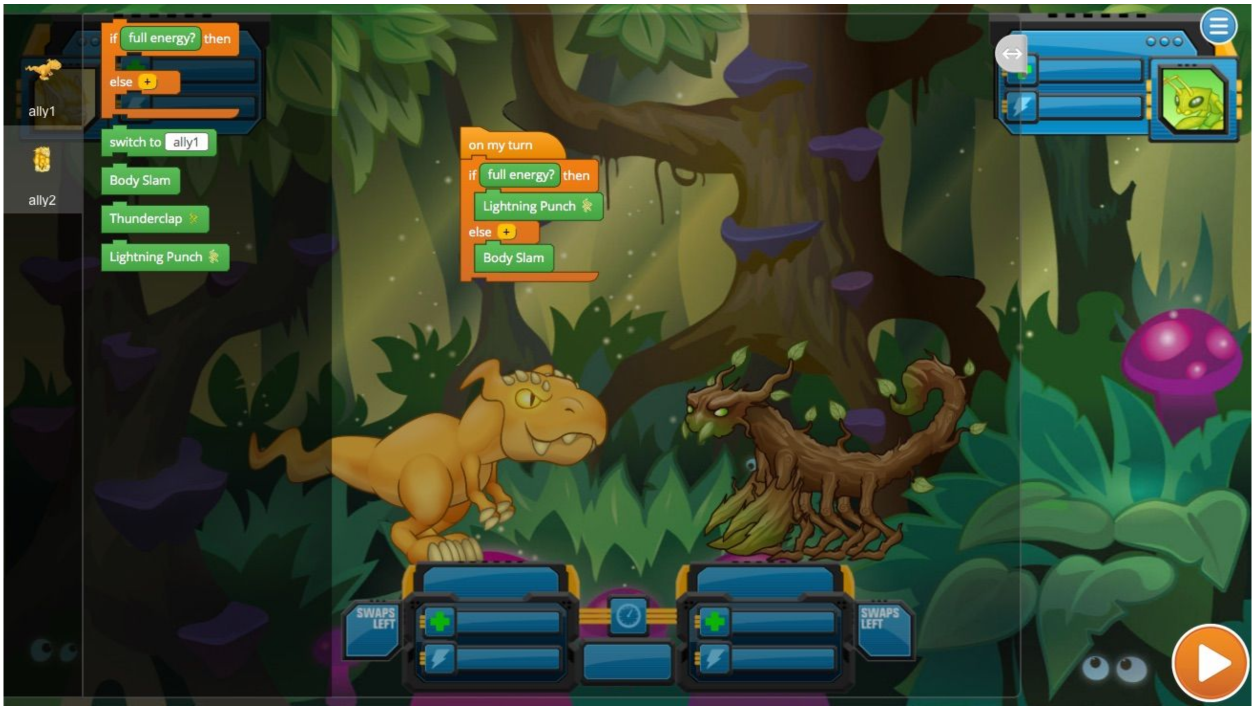
```
on my turn
if full energy? then
    Trample
else if energy of me < 0.6 * full energy of me then -
    Petrify
else +
    Armor Slam
```

Puzzle 20



```
on my turn
if can switch to ally2 ? and health of me < 0.5 * full health of me then
    switch to ally2
else if full energy? then -
    Fire Blast
else if enemy weak to my element? then -
    Burning Bite
else +
    Kick
```

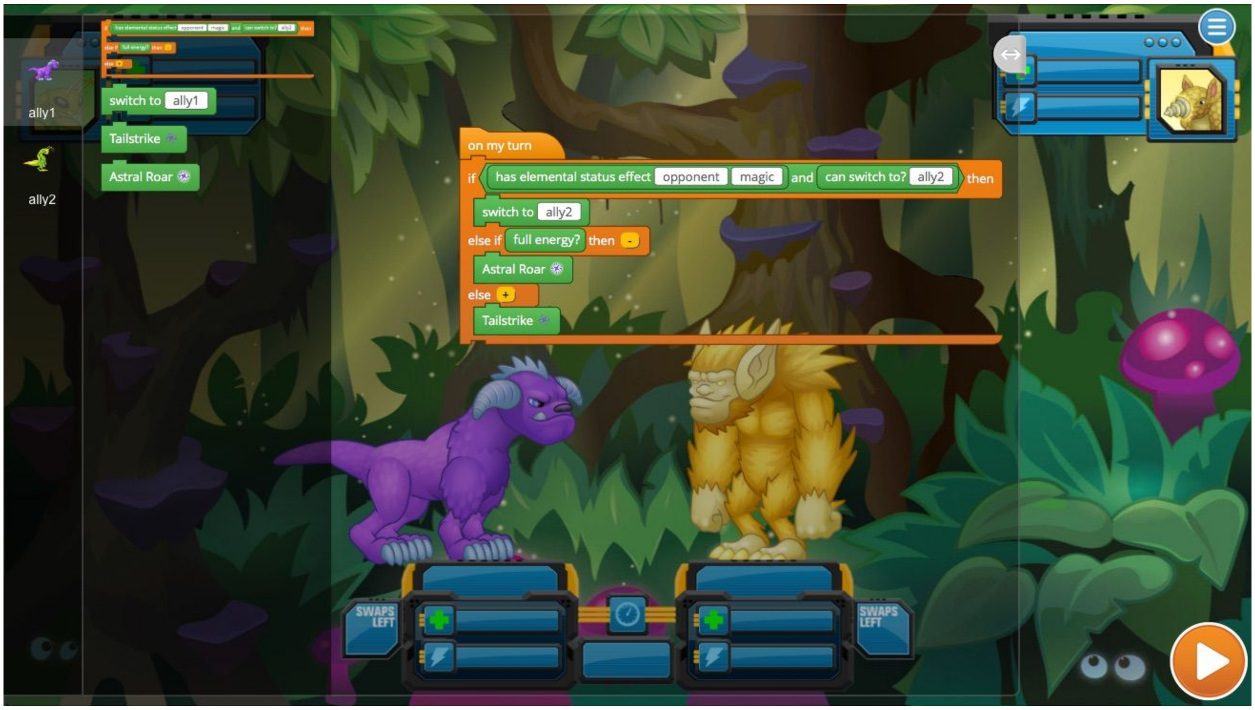
Puzzle 20 Cont.



```
if full energy? then
else +
switch to ally1
Body Slam
Thunderclap
Lightning Punch
```

```
on my turn
if full energy? then
    Lightning Punch
else +
    Body Slam
```

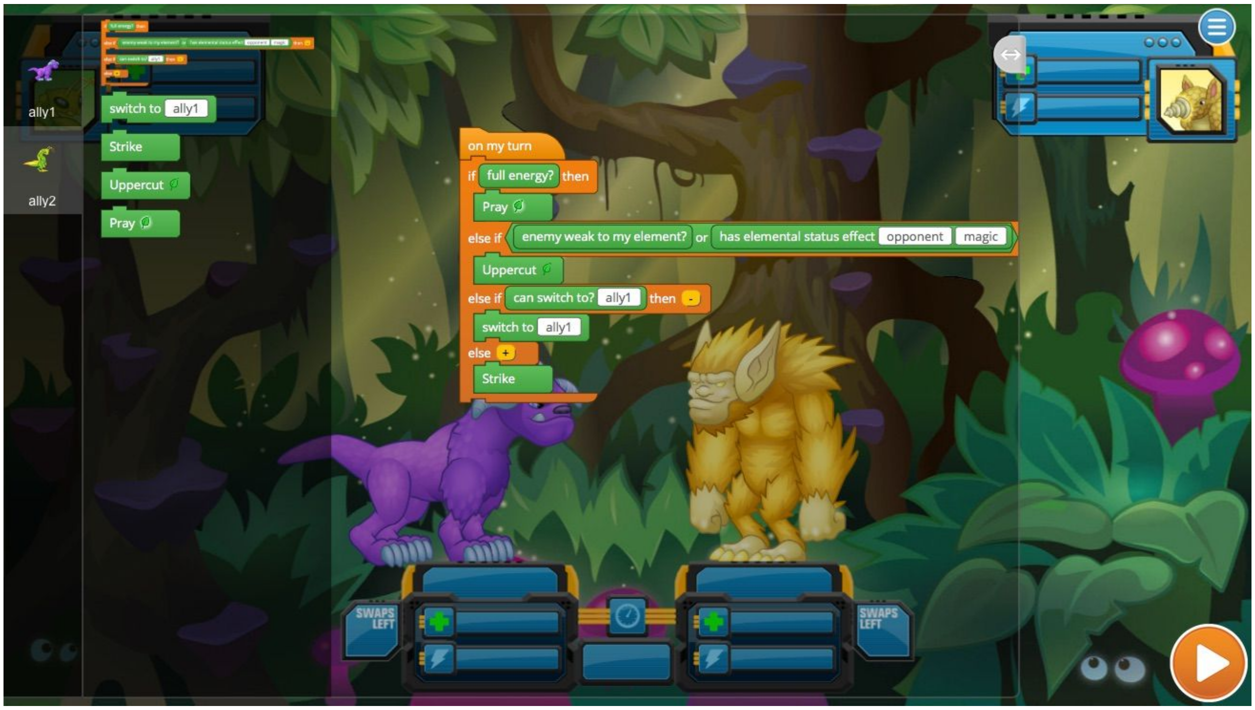
Puzzle 21



```
if has elemental status effect opponent magic and can switch to? ally2 then
else if full energy? then -
else +
switch to ally1
Tailstrike
Astral Roar
```

```
on my turn
if has elemental status effect opponent magic and can switch to? ally2 then
    switch to ally2
else if full energy? then -
    Astral Roar
else +
    Tailstrike
```

Puzzle 21 Cont.



```
on my turn
if full energy? then
    Pray
else if enemy weak to my element? or has elemental status effect opponent magic
    Uppercut
else if can switch to? ally1 then -
    switch to ally1
else +
    Strike
```

Teacher Guide to Tynker Hour of Code

Tynker's activities combine structured and open-ended components to support multiple learning styles. This experience emphasizes that programming requires not only knowledge of how to use a language, but also creativity and critical thinking to figure out how to build projects. Tynker is offering a wide variety of activities appropriate for all grades and experience levels.

What Tynker Provides

- Self-contained, game-based activities that students can complete with minimal support
- A combination of structured and open-ended activities that teach and allow students to create
- Puzzle solutions for all of our puzzles so you can give hints to any students who get stuck
- Common Core alignment for all activities
- A customized Hour of Code certificate for each activity that will show up in the student dashboard when a student completes an hour of programming

Why Children Love Tynker

- Tynker puzzles use game-based learning to teach programming and computational thinking concepts in a fun way
- Tynker tutorials guide students through all the steps to create storytelling projects, games, animations, and much more
- The Tynker Workshop allows students to create anything they can imagine with code
- Tynker's built-in Physics Engine makes it easy to create exciting projects
- Tynker's high quality media assets give students tons of creative options

Recommended Setup and Logistics

- Ideal environment: a computer lab, library, or classroom with your class
- Students can work individually or in pairs
- Students should have headphones if possible, but if not, you can turn the computer volume down
- Set up a free teacher account on tynker.com prior to the activity and add your students so you can track their progress and share a class showcase—and so students can continue working at home! (Note: Creating a teacher account is optional. You can complete your Hour of Code with Tynker without creating an account.)

We hope you take a look at all of our Hour of Code activities to figure out which one is right for your class. Join the global movement and host your Hour of Code with Tynker!