Lesson 6: Unlocking Abilities

1. **TRACKING SYSTEM** - So now that we've got all our players abilities working in the game, now we need to create the system that will allow us to unlock those abilities as your player progresses through the game itself! We're going to add another script, so that we can keep track of which abilities we currently have. It's going to be very simple.It's just going to be how we keep track of those abilities and then the player will be able to do their abilities based on what they have unlocked.

2. **Create a new script called PlayerAbilityTracker -** DRAG onto the player, open it, delta the update and start as we just want to keep track off a few bools (write them in)

3. Save this, then go on the player in unity to see the new tick box options (if script is attached)

4. **Open player controller script -** create variable to link to ability script then in start method - we say abilities equals get component What this will do is I look for a component that's attached to the same object that this script is attached. If it finds one it will assign an ability.

5. Go down to dashing portion, add the AND abilities.canDash.

6. Go down to jumping portion and restructure for abilities.canDoubleJump

7. Go down to ball mode and add abilities.canBecomeBall

8. Find the dropping bomb section and add abilities.canDropBomb

9. **PLAY TEST** - in the player you can tick and untick the abilities we can grant the player. Mess around with it but make sure that when they are not ticked, you cannot do that ability! When you're ready to move on, keep them off by default.

10. **UNLOCKING SYSTEM -** OK, so we've got our ability tracking system working correctly, what we want to do is make it so now we can have the system that will allow us to unlock abilities as we go through the game.

11. So, we will be creating pick ups that will grant us each of the abilities — go to the art folder —> find power up and drag the first frame into scene. **Rename it to Ability Pickup**

12. To the power up add a **circle collider 2d component. Tick is trigger, w**e'll also leave the radius size as it is handy from a gaming perspective to be able to grab these things easily.

13. Create a simple animation with the frames (you're on your own here)

14. Now we need to create the script that does the picking up -**create a new script called Ability Unlock** - attach it to the pick up object when ready

15. In the script - create bools for each of our unlocks (can delete the start and update too)

16. Then we create a new function for when the collider of this pickup touches 'other' which is another collider. We then say if this other is tagged as the Player we can then run a few checks. We make a reference to the PAT script called player and we use getcomponent again so it can automatically find the PAT script attached to the player.
17. The idea is that we can adjust the value stored here based on what we are trying to unlock. So, we will use conditionals here , the first one says if we unlock double jump, it becomes true so we can now do it! Hooray! Repeat the if statements for each of the abilities. Then add a destroy at the end so the pickup is removed when we collect it
18. **Back in unity** - make sure to tag the Player, StandingSprite and BallSprite as Player in its inspector so the collision reads properly.
19. PLAY TEST - If you select the Ability Pickup, you can tick which ability this pickup will unlock! Give it a try! You can even unlock everything with just this one!
20. TEST TIME - create a particle effect to run when you pick it up (see bullet controller for scripting help) and add a new layer and change for the pickup so our bullets do not collide. HINT: will have to go back and check how it's achieved.