



[Video Link](#)

Skip Counting by Pips

Summary

Students explore the effects of changing the number of pips on the composition of all of the pods using Grasplify. This more transformational approach to multiplication focuses on how each pip **spreads** across every pod.

Tasks

1. Demonstrate how to skip count by fives by adding more pods. Challenge students to find a way to skip count by five by changing the number of pips.



Skip Counting by Fives by Adding More Pods

What to Watch For

- Ensure that students are skip counting by changing the pips. When first given this task, many pairs will skip count by adding more pods (pictured above), which is similar to repeated addition. Students are engaging in the process of **multi-plying** here, since they are seeing each new pod as a copy of the unit of pips.
- A hint might be to tell students to make 5 a different way than 5 pips and 1 pod.

Questions to Ask

- *What did you notice about Grasplify?*
- *How is skip counting by pips different than skip counting by pods?*



TEACHER TIP

Skip counting by 5 by changing the number of pips requires students to first place 1 pip-finger and then create 5 pods for a product of 5. Students will then place down another pip-finger one at a time.

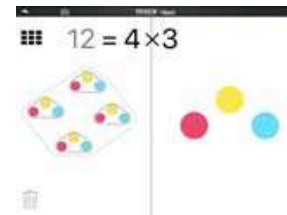
Extending Student Learning

- For pairs who have succeeded in skip counting by fives by changing the number of pips, you can invite them to try skip counting by 2 or 3 or 10.
- Invite students to skip count by a larger number that they are not as familiar with and to record the products in their notebooks.
- Make a product of twenty-five in Grasplify and skip count backwards by five by changing the number of pips.
- Make a product of fifteen in Grasplify and skip count backwards by three by changing the number of pips. Students will first need to decide how to make the product—3 pips, 5 times, or the other way around.
- Make a product of 24 in Grasplify and skip count backwards until you reach 12 by changing the number of pips. This can be done by counting backwards by twelves, starting with 2 pips and 12 pods; but it could also be done by counting backwards by sixes, starting with 4 pips and 6 pods.

Assessment

Sanna did some skip counting using Grasplify. She made this sequence of products: 3, 6, 9, 12, 15, 12, 9, 6, 3. Show or explain how she did this using drawings, words or a combination of both.

As a formative assessment task, project the image below.



Ask students to answer the following questions:

1. Sanna used Grasplify to skip count to 12. Describe each of the steps that she did if she was skip counting by changing the pips. If students need a hint, Sanna started with just one pip.
2. Imagine that Sanna placed another finger on the pip-side of the screen. Draw what we would see on her screen.



TEACHER TIP

It's also interesting to explore skip counting backwards. Watch that students don't do this by dragging pods to the trash, which emphasises repeated addition. Instead, encourage them to skip count backwards by changing the number of pips.



CAUTION!

The choice of the factors that go into the product matters for this task.