Lesson Printables

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Lesson Information Sheet: 2

Sunlight Zone
Activity: 3
Ten Frame: 4

Twilight Zone
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Midnight Zone
Activity: 7
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Let's subtract numbers within 10.

Why learn this?

Learning to subtract numbers within 10 is a key math skill that builds the foundation for more complex problem-solving. It helps students understand the concept of taking away, recognize number relationships, and develop mental math strategies. Mastering this skill boosts confidence and prepares students for subtracting larger numbers.

How do you use a ten frame to subtract? How can number bonds help when subtracting?

Subtracting from 10 using a ten frame
- Use objects to fill in the ten frame. These could be balls of scrap paper, counters, beans, etc.
  - ➔ Ask your student how many items are needed to fill the ten frame in order to reinforce there are 10 spaces or boxes.
- Create a subtraction number sentence.
  - ➔ Let's look at 10 - 4.
  - ➔ Ask your student what amount needs to be subtracted or taken away from 10.
  - ➔ Physically remove 4 objects.
  - ➔ How any objects are left on the ten frame?
    - ◆ This is your answer.

Number bond connections
- If students have a solid understanding of what 1-digit numbers can be added together to make 10, they can use this information to subtract numbers from 10.
- In this lesson, we explain that subtraction is the opposite or inverse of addition. When your student approaches a subtraction problem, you could flip it into an addition question.
  - ➔ Instead of saying 10 - 4, you could reframe the question by asking your student what number needs to be added to 4 to make 10.
  - ➔ As you continue to practise this, get your student to create the addition question that matches the subtraction number sentence.

Let's warm up!

Starter Activity - Winter Prep
A squirrel has hidden some nuts behind a picture of an ice block. Can students work out how many nuts the squirrel could have hidden?

To support, students could:
- Use objects to try to create what they think the nuts look like under the ice block picture.
- Be asked guiding questions.
  - ➔ How many nuts do you think are in each row? What addition number sentence could show this?
  - ➔ How many nuts do you think are in each column? What addition number sentence could show this?
  - ➔ Can you think of a multiplication number sentence that could all match the picture?
    - ◆ How many equal groups do you see if you look at the rows?
    - ◆ How many equal groups do you see if you look at the columns?

To challenge, students could:
- Explore how many different ways 12 nuts could be organised into equal groups.

Let's do this!

Main Activity - Students should play the game Subtraction Pyramid. This game requires playing cards. Students should create a pyramid of cards that has up to 5 rows. Cards on the bottom row are 'free cards' because no other cards are covering them. Students should flip over a card and subtract it from 10. They should look for their answer on the pyramid. If the answer is a free card, it can be removed from the pyramid. If the answer is not a free card, students should flip over a new card. The goal is to try to get rid of all the cards in the pyramid before the deck runs out. Jacks, Queens and Kings are wild cards and can become any number. Note, the game become increasingly harder as more cards are removed from the pyramid.

To support, students could:
- Use a ten frame to help them subtract.
- Make a 4 row pyramid. See Sunlight Zone.

To challenge, students could:
- Make a 5 row pyramid.
- Play the Midnight version where students subtract 1-digit numbers from multiples of 10. See the Midnight printables for more details. Note, this version of the game will need to be explicitly explained to your student.

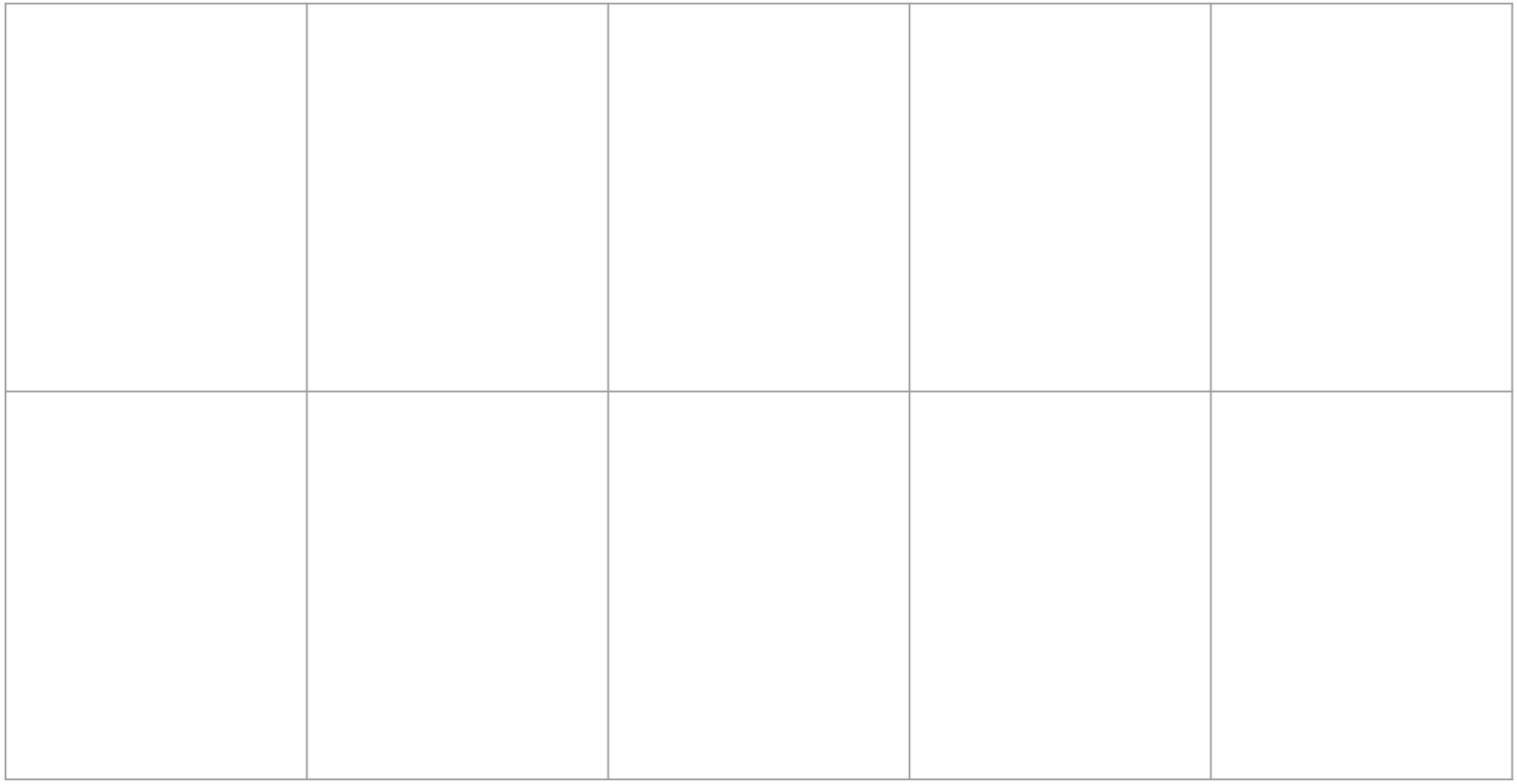
Sunlight Pyramid

1. Make your subtraction pyramid out of cards.
   - ➔ It should have 4 rows.
   - ➔ Put the remaining cards in a pile face down.
2. Flip over a card. Subtract that number from 10.
   - ➔ If the answer is a 'free card' with nothing on top of it, you can remove the card from the pyramid and keep it.
   - ➔ If a free card isn't available, you must flip over another card.
3. If you flip over a Jack, Queen or King, you can turn the card into any number you want.
   - ➔ If a Jack, Queen or King is in your pyramid, it can become any number you want.
4. Can you collect all of the pyramid cards before the deck runs out?

Number Sentence	Something else I know…

Challenge: Subtract numbers from 10.
Excellence: Include something else you know that is connected to your number sentence.
Legend: Give your pyramid an extra row.
Does this make the game harder or easier?

Ten Frame



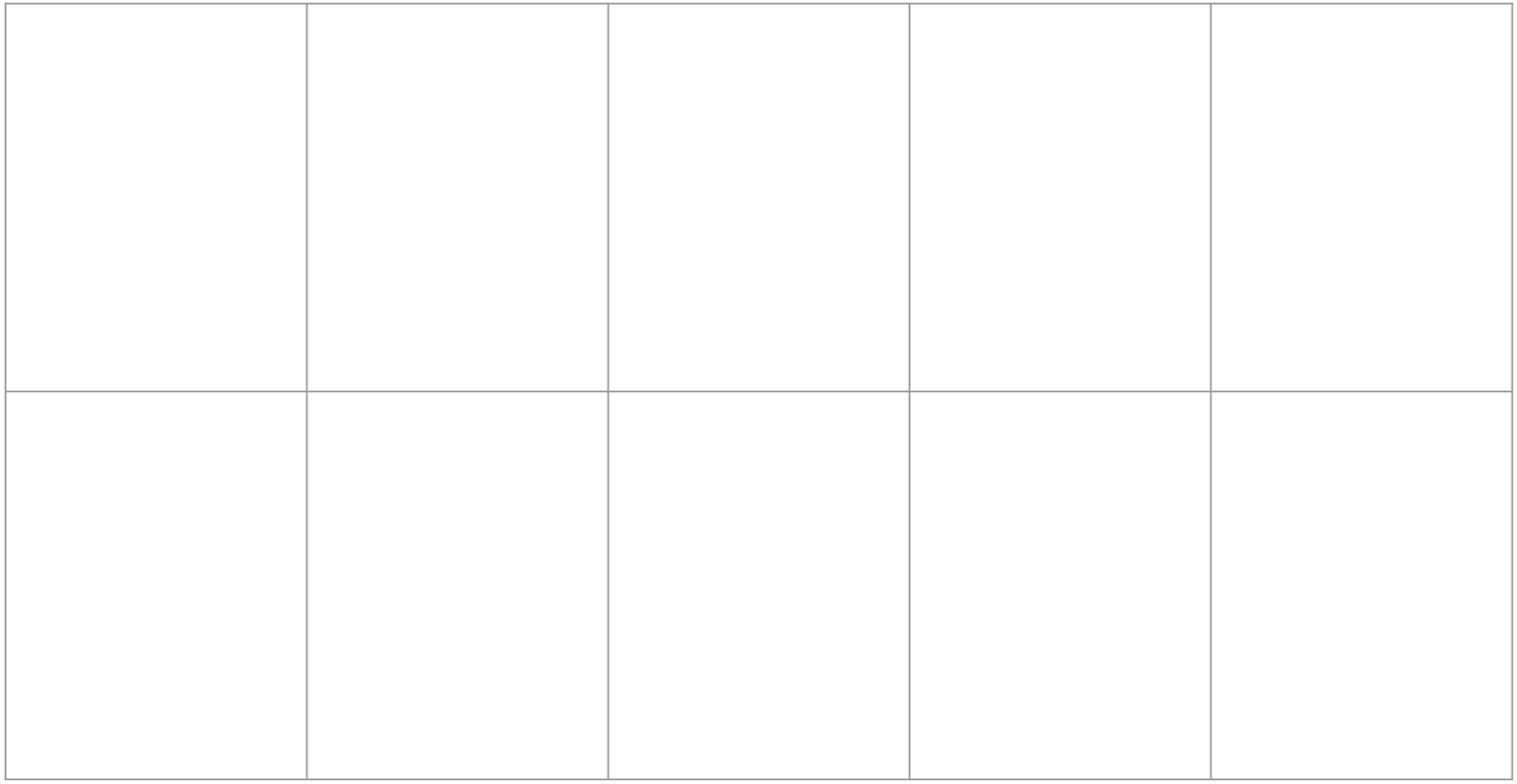
Twilight Pyramid

1. Make your subtraction pyramid out of cards.
   - ➔ It should have 5 rows.
   - ➔ Put the remaining cards in a pile face down.
2. Flip over a card. Subtract that number from 10.
   - ➔ If the answer is a 'free card' with nothing on top of it, you can remove the card from the pyramid and keep it.
   - ➔ If a free card isn't available, you must flip over another card.
3. If you flip over a Jack, Queen or King, you can turn the card into any number you want.
   - ➔ If a Jack, Queen or King is in your pyramid, it can become any number you want.
4. Can you collect all of the pyramid cards before the deck runs out?

Number Sentence	Something else I know…

Challenge: Subtract numbers from 10.
Excellence: Include something else you know that is connected to your number sentence.
Legend: Give your pyramid an extra row.
Does this make the game harder or easier?

Ten Frame



Midnight Pyramid

1. Make your subtraction pyramid out of cards.
   - ➔ It should have 5 rows.
   - ➔ Put the remaining cards in a pile face down.
2. Flip over 2 cards from the pile.
   - ➔ Put a 0 on the end of one of your cards.
     - ◆ If you have an 8 and 7, you could make 80 or 70.
   - ➔ Subtract the other card from your 2-digit number.
     - ◆ If you make 70, your number sentence would be 70 - 8.
     - ◆ The ones digit in your answer is the card you can remove from the pyramid.
       - 70 - 8 = 62, so you would remove a 2 from the pyramid if it is free.
   - ➔ If a free card isn't available, you must flip over another card.
3. If you flip over a Jack, Queen or King, you can turn the card into any number you want.
   - ➔ If a Jack, Queen or King is in your pyramid, it can become any number you want.
4. Can you collect all of the pyramid cards before the deck runs out?

Number Sentence	Something else I know…

Challenge: Subtract numbers from multiples of 10.
Excellence: Include something else you know that is connected to your number sentence.
Legend: Give your pyramid an extra row.
Does this make the game harder or easier?