Teaching Activity Guide

Deductive Detective

Table of Contents

3 How to Use This Activity Guide (General)
4 What Do Children Already Know?
4 Pre-Reading Questions
5 Comprehension Questions & Writing Prompts
6 Cross-Curricular Vocabulary Activities
7 Word Bank
8 Cross Curricular: Silly Sentences
9 Word Search
10 Word Families & Rhyming Words
11 Edible Sorting and Classifying Activity
13 Classifying Animals
14 Animal Chart
17 Animal Sorting Cards
22 Math: Probability
23 What are the Chances?
24 Number Families: a Dozen and a Baker's Dozen
25 Number Patterns and Subtraction
26 Deductive Reasoning
27 Math Cards
29 Map Activity
30 Coloring Pages
34 Glossary
38 Answers
40 Appendix A—"What Children Know" Cards
41 Appendix B—Venn Diagram

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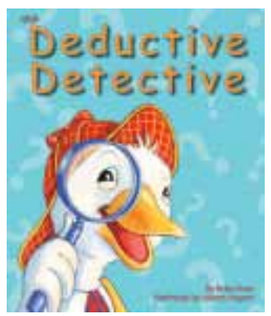


by Brian Rock
illustrated by Sherry Rogers

How to Use This Activity Guide (General)

There are a wide variety of activities that teach or supplement all curricular areas. The activities are easily adapted up or down depending on the age and abilities of the children involved. And, it is easy to pick and choose what is appropriate for your setting and the time involved. Most activities can be done with an individual child or a group of children.

For teachers in the classroom: We understand that time is at a premium and that, especially in the early grades, much time is spent teaching language arts. All Sylvan Dell titles are specifically selected and developed to get children excited about learning other subjects (science, geography, social studies, math, etc.) while reading (or being read to). These activities are designed to be as comprehensive and cross-curricular as possible. If you are teaching sentence structure in writing, why not use sentences that teach science or social studies? We also know and understand that you must account for all activities done in the classroom. While each title is aligned to all of the state standards (both the text and the For Creative Minds), it would be near impossible to align all of these activities to each state's standards at each grade level. However, we do include some of the general wording of the CORE language arts and math standards, as well as some of the very general science or social studies standards. You'll find them listed as "objectives" in italics. You should be able to match these objectives with your state standards fairly easily.

For homeschooling parents and teachers in private schools: Use as above. Aren't you glad you don't have to worry about state standards?

For parents/caregivers: Two of the most important gifts you can give your child are the love of reading and the desire to learn. Those passions are instilled in your child long before he or she steps into a classroom. Many adults enjoy reading historical fiction novels . . . fun to read but also to learn (or remember) about historical events. Not only does Sylvan Dell publish stories that are fun to read and that can be used as bedtime books or quiet "lap" reading books, but each story has non-fiction facts woven through the story or has some underlying educational component to sneak in "learning." Use the "For Creative Minds" section in the book itself and these activities to expand on your child's interest or curiosity in the subject. They are designed to introduce a subject so you don't need to be an expert (but you will probably look like one to your child!). Pick and choose the activities to help make learning fun!

For librarians and bookstore employees; after-school program leaders; and zoo, aquarium, nature center, park & museum educators: Whether reading a book for story time or using the book to supplement an educational program, feel free to use the activities in your programs. We have done the "hard part" for you.

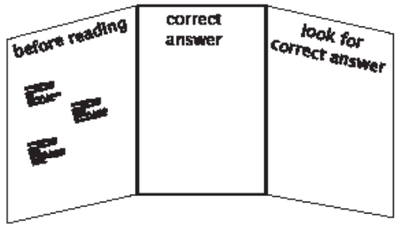
What Do Children Already Know?

Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking “beyond the box” about a particular subject.

Before reading the book, ask the children what they know about the subject. A list of suggested questions is below. The children should write down their “answers” (or adults for them if the children are not yet writing) on the chart found in Appendix A, index cards, or post-it notes.

Their answers should be placed on a “before reading” panel. If doing this as a group, you could use a bulletin board or even a blackboard. If doing this with individual children, you can use a plain manila folder with the front cover the “before reading” panel. Either way, you will need two more panels or sections—one called “correct answer” and the other “look for correct answer.”

Do the children have any more questions about the subject ? If so, write them down to see if they are answered in the book.



After reading the book, go back to the questions and answers and determine whether the children’s answers were correct or not.

If the answer was correct, move that card to the “correct answer” panel. If the answer was incorrect, go back to the book to find the correct information.

If the child/children have more questions that were not answered, they should look them up.

When an answer has been found and corrected, the card can be moved to the “correct answer” panel.

Pre-Reading Questions

What is a detective?

What does “deductive” mean?

What do you think a deductive detective might do?

What type of animals have feathers?

What type of animals have fur or hair?

What are some animals that climb trees?

Comprehension Questions & Writing Prompts

Objective Core Language Arts, Speaking and Listening: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
Retell stories, including key details, and demonstrate understanding of their central message or lesson.
Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Detective Duck ruled out the mouse, elephant, and the kangaroo because of their sizes. What size are these animals?

What do roosters do at dawn?

How did Detective Deductive know Rooster couldn’t have stolen the cake at dawn?

Birds don’t have hair, they have feathers. In fact, birds are the only animals that have feathers. Which animal in the story was cleared because it is a bird?

Do you know which class of animals (mammals, birds, reptiles, fish, or amphibians) is the only one with hair or fur?

What body parts do male moose have that could knock over hanging pots and pans?

Why did Detective Duck know that Moose couldn’t’ have been in the kitchen?

How are tiger paws different from hands?

How did Detective Duck know that Tiger couldn’t have left a handprint?

What animal is known for swinging from tree to tree?

Who stole the cake?

Why did he say he couldn’t help himself?

Write a story about something being stolen. Describe an animal that could have stolen it and why.

Cross-Curricular Vocabulary Activities

Objective Core Language Arts:
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade-level reading and content.
Identify new meanings for familiar words and apply them accurately (e.g., duck is a bird & the verb to duck).
Use words & phrases acquired through conversations, reading/being read to, and responding to texts.
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade-level topic or subject area.
Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
Use frequently occurring adjectives.

Vocabulary Game: This activity is a very general idea and is designed to get children thinking of vocabulary words that will then be used as the beginning vocabulary list for a science lesson.

Select an illustration from the book and give the children a specific length of time (five minutes?) to write down all the words they can think of about the particular subject. It is helpful to project an illustration on a whiteboard. Use the eBook or book preview found at www.SylvanDellPublishing.com.

The children's word list should include anything and everything that comes to mind, including nouns, verbs, and adjectives. At the end of the time, have each child take turns reading a word from his/her list. If anyone else has the word, the reader does nothing. However, if the reader is the only one with the word, he/she should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall.

At the end, the child with the most words circled "wins." And you have a start to your science vocabulary list. Note: if a child uses an incorrect word, this is a good time to explain the proper word or the proper usage.

Glossary/Vocabulary Words: Word cards may be used (see Appendix) or have children write on index cards, a poster board, or on a chalkboard for a "word wall." If writing on poster board or chalkboard, you might want to sort words into nouns, verbs, etc. right away to save a step later if using for Silly Sentences (on the next page). Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently. The glossary has some high-level words. Feel free to use only those words as fit your situation.

Using the Words: The following activities may be done all at once or over a period of several days.

- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what they are on the backs of the cards. When the cards are turned over, all you will see is "noun," etc. (these can then be used for the "silly sentences" on the next page).
- After the cards have been sorted, go over the categories to ensure that all cards have been placed correctly. (Mistakes are a great opportunity to teach!)
- Choose two words from each category and write a sentence for each word.
- Write a story that uses at least ten vocabulary words from the word sort.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper. Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story. Edit and re-write paragraphs into one informative paper or a story.

Silly Sentence Structure Activity: This "game" develops both an understanding of sentence structure and the science subject. Use words from the "word wall" to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the correct information in the book.

Word Bank

See Glossary for words in Spanish and the definition in English.

Adjective	Noun		Verb
big	antler	mouse	climb
dark	bird	pig	crow
long	claw	raccoon	drag
short	elephant	rooster	jump
small	feather	sunrise	swing
tall	hair	swan	
	hand	tail	
	handprint	thief	
	monkey	tiger	
	moose	tree	

Cross Curricular: Silly Sentences

1. _____ couldn't have taken the cake because it would have been too big for him to carry.
   (noun)
2. Rooster couldn't have taken the cake because he was _____ at _____ when the cake was stolen.
   (verb) (noun)
3. _____ could only leave through the doors but the doors were locked.
   (noun)
4. _____ couldn't have taken the cake because the thief left _____ and birds have _____.
   (noun) (noun) (noun)
5. _____ would have knocked over all the pots and pans with his _____.
   (noun) (noun)
6. The thief _____ his _____ through flour.
   (verb) (noun)
7. _____ couldn't be the thief because he doesn't have a tail _____ enough to _____.
   (noun) (adjective) (verb)
8. The thief had to leave through the window but the _____ and the _____ were too _____ to _____ through it.
   (noun) (noun) (adjective) (verb)
9. The thief left _____, but _____ have _____ not hands.
   (noun) (noun) (noun)
10. The thief had to _____ from _____ to tree to get away. Raccoons _____ trees but they don't swing from one to another.
    (verb) (noun) (verb)

Word Search

Find the hidden words. Even non-reading children can match letters to letters to find the words! Easy—words go up to down or left to right (no diagonals). For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	C	K	U	D	A	R	K	E	R	W
2	M	E	L	E	P	H	A	N	T	O
3	O	H	J	D	R	O	N	P	I	G
4	O	M	O	U	O	R	G	A	G	M
5	S	O	Q	C	O	S	A	L	E	O
6	E	B	D	T	S	E	R	P	R	U
7	N	S	U	I	T	C	O	W	A	S
8	F	W	C	V	E	G	O	E	M	E
9	C	A	K	E	R	S	D	T	I	V
10	I	N	R	A	C	C	O	O	N	U

CAKE
COW
DEDUCTIVE
DUCK
ELEPHANT
HORSE
KANGAROO
MOOSE
MOUSE
PIG
RACCOON
ROOSTER
SWAN
TIGER

Language Arts: Word Families & Rhyming Words

Language Arts, Reading Standards: Foundational Skills, Recognize and produce rhyming words.

Word families are groups of words that have some of the same combinations of letters in them that make them sound alike…or rhyme. For example ad, add, bad, brad (Brad), cad, Chad, clad, dad, fad, gad, glad, grad, had, lad, mad, pad, plaid (silent 'i"), sad, shad, and tad all have an "ad" letter combination and rhyme.

- Find and write down rhyming words in the text.
- Are they in the same word family?
- If so, circle the combination of letters that are the same.
- Can you think of more words in the word family?

See Appendix "C" for rhyming word cards that can be used for this.

Cards can also be cut out, mixed up, and used to find rhyming words or even as a "Memory" game.

Rhyming words are: **trail** and **tail** They are / are not from the same word family. Other words that rhyme are:	Rhyming words are: **sill** and **spill** They are / are not from the same word family. Other words that rhyme are:
Rhyming words are: **pig** and **big** They are / are not from the same word family. Other words that rhyme are:	Rhyming words are: **cake** and **bake** They are / are not from the same word family. Other words that rhyme are:

Edible Sorting and Classifying Activity

Objective Core Language Arts Vocabulary Acquisition and Use: Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

Objects and materials can be sorted and described by their properties. (color, shape, size, weight and texture)

Use whole numbers, up to 10, in counting, identifying, sorting, and describing objects and experiences.*

Gather a cup of edible "sorting items." For example:

- As many different kinds of M&Ms as you can find
- Chocolate & peanut butter chips
- Hershey Kisses
- Peanuts or other type of nuts

Ask the children to sort the items into groups. There is no right and wrong, only what makes sense to the child. When finished, ask the child:

What feature or attribute (color, size, ingredient, etc.) did you use to sort the items?

- Are there some items that fit more than one group or don't fit any group?
- If so, how did the child decide which attribute was more important?
- How are various objects similar and different?
- Is it easy to sort or were there some items that were a little confusing?

If more than one person did this, did everyone sort by the same attribute? To extend the learning, graph the attributes used to sort the items (blank graph below).

Graph the attributes that children used to sort their items. (Graph provided on next page.

What was the most common attribute (size, shape, color, etc.) used?

Objective: Classify organisms according to one selected feature, such as body covering, and identify other similarities shared by organisms within each group formed.

Describe several external features and behaviors of animals that can be used to classify them (e.g., size, color, shape of body parts).

Identify observable similarities and differences (e.g., number of legs, body coverings, size) between/ among different groups of animals.

10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
attribute				

Classifying Animals

Objective: Classify organisms according to one selected feature, such as body covering, and identify other similarities shared by organisms within each group formed.

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Just as we sort candy, scientists sort all living things into groups to help us understand and connect how things relate to each other. Scientists ask questions to help them sort or classify animals.

Based on the answers to the questions, scientists can sort the living organisms. The first sort is into a Kingdom. There are five commonly accepted Kingdoms: Monera, Protista, Fungi, Plantae, and Animalia. All of the living things in this book belong to Animalia or the Animal Kingdom.

The next big sort is into a Phylum. One of the first questions that a scientist will ask is whether the animal has (or had at some point in its life) a backbone. If the answer is "yes," the animal is a vertebrate. If the answer is "no," the animal is an invertebrate.

Each Phylum is broken down into Classes, like mammals, birds, reptiles, fish, amphibians, insects, or gastropods (snails). Then each class can be broken down even further into orders, families, genus and species, getting more specific.

The scientific name is generally in Latin or Greek and is the living thing's genus and species. People all over the world use the scientific names, no matter what language they speak. Most living organisms also have a common name that we use in our own language.

Some questions scientists ask:

- Does it have a backbone?
- What type of skin covering does it have?
- Does it have a skeleton? If so, is it inside or outside of the body?
- How many body parts does the animal have?
- Does it get oxygen from the air through lungs or from the water through gills?
- Are the babies born alive or do they hatch from eggs?
- Does the baby drink milk from its mother?
- Is it warm-blooded or cold-blooded?

Using what you know, and information and pictures in the book, see how many Animal Chart squares you can fill in for each animal.

Animal Chart

	Animals		
Appendages	legs (how many)		
	flippers/fins		
	wings		
	tail/no tail		
	horns/antlers		
Feet or hands: if they have; may have more than one	claws		
	web		
	toes		
	opposable thumbs/toes		
	hooves		
Movement: may do more than one	walks/runs		
	crawls		
	flies		
	slithers		
	swims		
	climbs		
	hops		
Backbone	backbone/vertebrate		
	no backbone/invertebrate		
Skeleton	inside skeleton (endoskeleton)		
	outside skeleton (exoskeleton)		
	no skeleton		
Body covering	hair/fur/whiskers/quills		
	feathers		
	dry scales or bony plates		
	moist scales		
	smooth, moist skin		
	hard outer shell		
	hard outer covering		
Color/patterns	stripes or spots		
	mostly one color		
	skin color changes		
	bright, vivid colors		
Gets oxygen	lungs		
	gills		
Body temperature	warm-blooded (endothermic)		
	cold-blooded (ectothermic)		
Babies	born alive		
	hatch from eggs		
	born alive or hatch from eggs		
Metamorphosis	complete		
	incomplete		
	none		
Teeth	sharp		
	flat		
	no teeth (bill/beak)		
Food	plant eater (herbivore)		
	meat eater (carnivore)		
	both (omnivore)		

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Teeth	sharp		
	flat		
	no teeth (bill/beak)		
Food	plant eaters (herbivore)		
	meat eather (carnivore)		
	both (omnivore)		

Animal Sorting Cards

Objective: Classify organisms according to one selected feature, such as body covering, and identify other similarities shared by organisms within each group formed.

Describe several external features and behaviors of animals that can be used to classify them (e.g., size, color, shape of body parts).

Identify observable similarities and differences (e.g., number of legs, body coverings, size) between/among different groups of animals.

Animal Card Games:

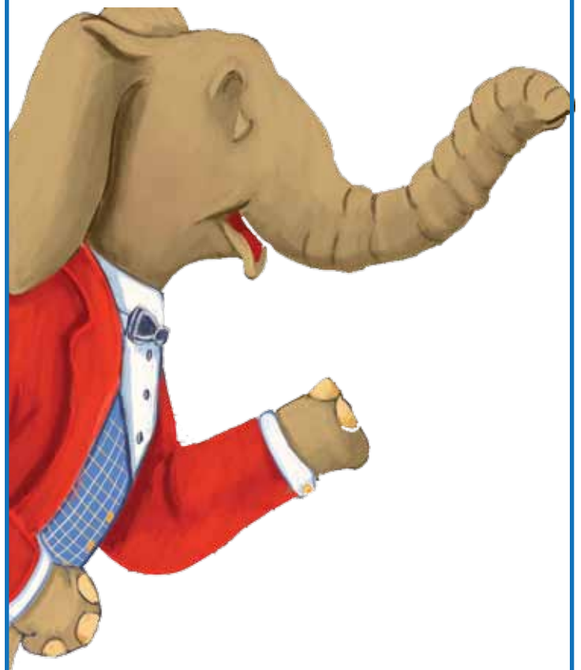
Sorting: Depending on the age of the children, have them sort cards by:

- where the animals live (habitat)
- number of legs (if the animals have legs)
- how they move (walk, swim, jump, or fly)
- type of skin covering (hair/fur, feathers, scales, moist skin)
- what they eat (plant eaters/herbivores, meat eaters/carnivores, both/omnivores)
- tail, no tail
- colors or skin patterns
- animal class

Memory Card Game: Make two copies of each of the sorting card pages and cut out the cards. Mix them up and place them face down on a table. Taking turns, each player should turn over two cards so that everyone can see. If the cards match, he or she keeps the pair and takes another turn. If they do not match, the player should turn the cards back over and it is another player's turn. The player with the most pairs at the end of the game wins.

Who Am I? Copy and cut out the cards. Poke a hole through each one and tie onto a piece of yarn. Have each child put on a "card necklace" without looking at it so the card hangs down the back. The children get to ask each person one "yes/no" question to try to guess "what they are." If a child answering the question does not know the answer, he/she should say, "I don't know." This is a great group activity and a great "ice-breaker" for children who don't really know each other.

Charades: One child selects a card and must act out what the animal is so that the other children can guess. The actor may not speak but can move like the animal and imitate body parts or behaviors. For very young children, you might let them make the animal sound. The child who guesses the animal becomes the next actor.



Math: Probability

Pretend that you just poured out a handful of Skittles or M&Ms. You have 15 candies all together: 2 purples, 4 yellows, 2 greens, 2 reds, 1 orange, 1 brown, and 3 blues.

What are the chances of eating a yellow first?
Words: 4 (yellow) out of 15 (total) or Fraction: 4/15

What are the chances of eating a green first?
Words: 2 (green) out of 15 (total) or Fraction: 3/8

What are the chances of eating an orange first?
Words: 1 (orange) out of 15 (total)
Fraction: 1/15

What are the chances of eating a red first?

What are the chances of eating a brown first?

What are the chances of eating a blue first?

What are the chances of eating a purple first?

Activity: Get a small bag of Skittles, M&M's, or other small candies and pour them out onto a clean surface. (Don't eat yet.)

Count the total number of candies. The total will stay the same as you write the probability of choosing each color. Write down the probability of choosing each color first.

You may write the probability in words, as a fraction or draw a picture. When you are done, have an adult or older sibling check your work. If you were correct, EAT!!

Something to think about: Does the probability of getting a red candy change as you eat the candies?

Math: What are the Chances?

When Detective Duck arrived at the scene of the crime, he began to use deductive reasoning to solve the crime. If he had just guessed who the thief was, then chances were that he would have been wrong! In math, the chances of something happening is called the probability. Probability can be given in words, as a fraction or with a picture.

There are twelve (12) animal suspects.

If you choose one of these animals, what is the probability that you will choose an animal whose name begins with "M?"

Monkey and Moose both begin with "M" so the chances or probability are 2 (number of animals whose names begin with "M") out of 12 (total number of animal suspects). That can be written as a fraction (2/12) or shown as a picture.

If you choose one of these animals, what is the probability that you will choose an animal you would keep on a farm? How would you say that in words and how would you write it as a fraction?

What animals live on a farm?

How many is that out of the 12?

As Deductive Detective subtracted suspects with his logical thinking, did his chances of picking the cake thief get easier or harder?

By the time he got down to the raccoon and the monkey, what were the chances that he would pick the cake thief?

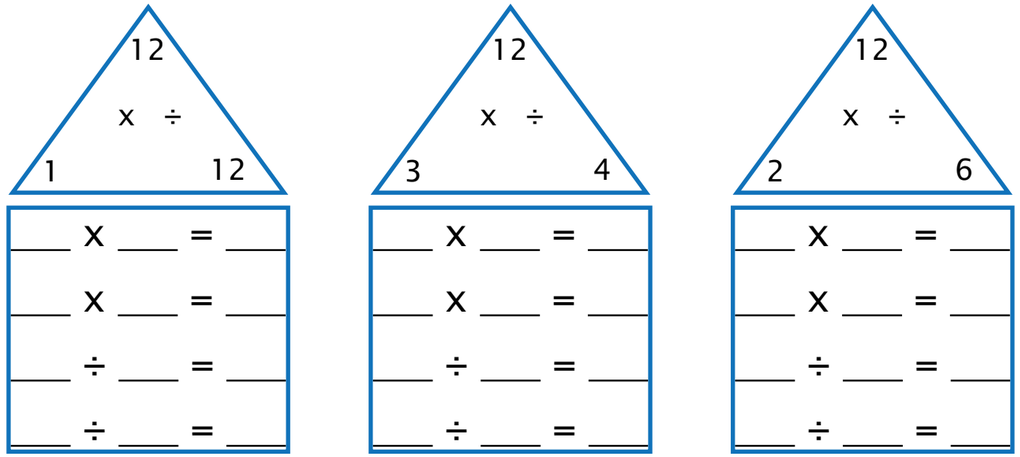
Number Families: a Dozen & a Baker's Dozen

There are a dozen inches in a foot.

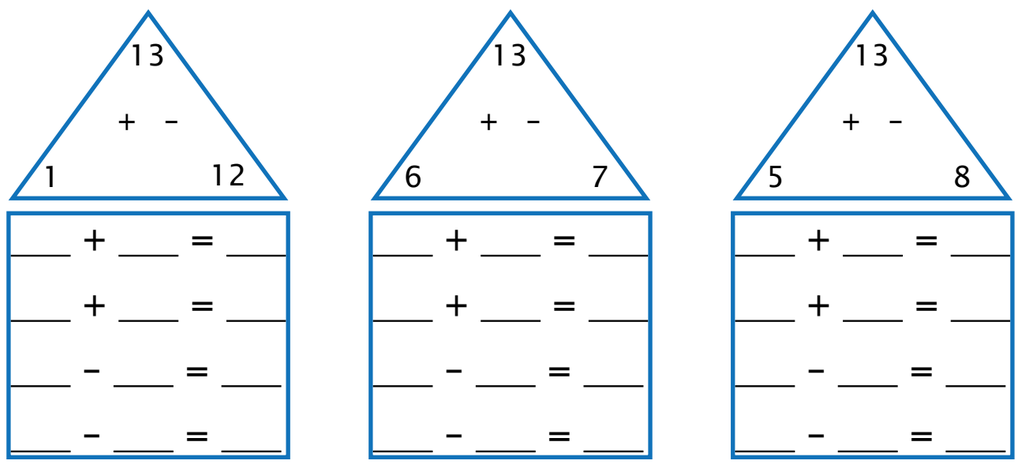
There are a dozen hours in a half-day.

There are a dozen months in a year.

A "dozen" is a group of twelve. Twelve is an easy number to work with because it is easily divisible by many factors. Can you fill in the number families below?

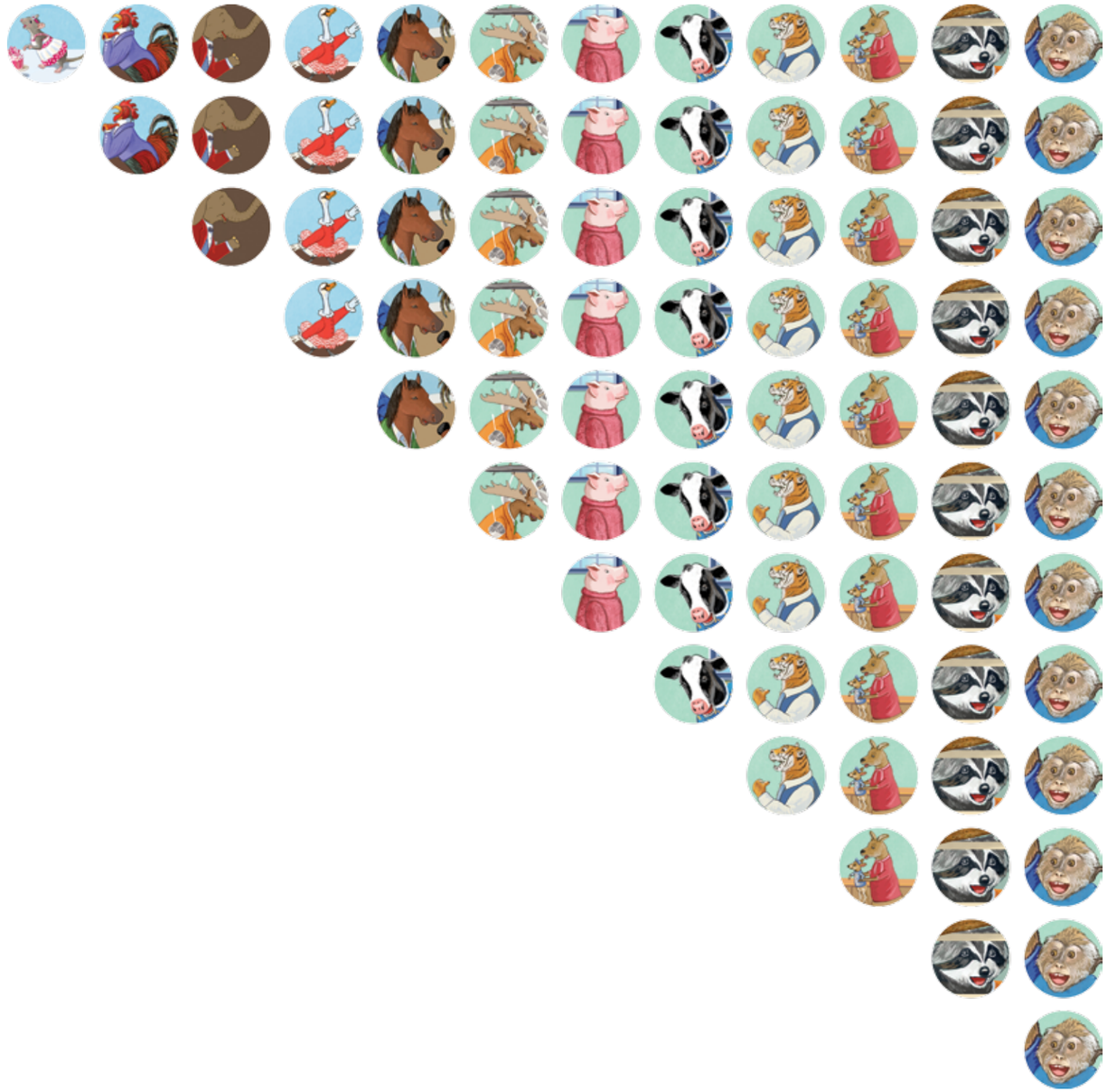


Baked goods such as bread rolls, muffins, cupcakes, and donuts are often sold by the dozen. Many bakers make an extra, just in case one gets burned, dropped, or turns out too small. Because of this, a group of thirteen (a dozen + 1) is called a long dozen or a "baker's dozen."



Math: Number Patterns and Subtraction

Do you see a pattern in the numbers of suspects left as Deductive Detective cleared each one?



Deductive Reasoning

Put on your detective hat!! Now that you have tested your skills of deduction, it is time to put those skills to the test.

On the last day of school, three friends went home to play games and have a treat. As Jason, Marie and Erin were playing, Erin's mom came in with a delicious looking plate of cookies! There were eight cookies on the plate which meant that each kid could have two cookies and there would be two leftover for later. On the plate were 2 lemon cookies, 2 chocolate chip cookies, 2 oatmeal raisin cookies, and 2 M&M cookies.

"May I please have a chocolate chip and an oatmeal raisin cookie?" Marie asked. "I don't like lemon but I love chocolate!"

Jason asked, "May I have a chocolate chip and an M&M cookie? Cookies are my favorite and I really love all chocolate cookies!"

Erin got his cookies last. "May I have the oatmeal raisin and a lemon cookie? I love chocolate but I can't eat the coating on the M&Ms."

The kids got their cookies and went back to playing. When Erin's dad came home, he heard that there were two cookies left over on the counter. He went to eat them but when he got to the kitchen, the cookies were gone!!

Use deductive reasoning to figure out which two cookies were left after the kids got their cookies.

Which of the three kids could have eaten the last two cookies? How do you know?

Hint: Just like Deductive Detective, try making a list and cross the cookies out as they are taken, draw a picture, or make a chart to figure it out.

Math Cards

Objective Core Mathematics Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (up to 10)
Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
Use numbers, up to 10, to place objects in order, such as first, second, and third, and to name them
For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Math Card Games

(Make four copies of the math cards to play these games):

Tens Make Friends Memory Game is a combination of a memory and adding game.

- Play like the memory game, above.
- If the animal numbers add up to 10, the child keeps the pair and takes another turn.
- If they do not add up to ten, the player should turn the cards back over and it is another player's turn.

Go Fish for Fact Families is a twist on "Go Fish."

- Shuffle cards and deal five cards to each player. Put the remaining cards face down in a draw pile.
- If the player has three cards that make a fact family, he/she places them on the table and recites the four facts related to the family. For example, if someone has a 2, 3, and 5, the facts are: 2 + 3 = 5, 3 + 2 = 5, 5 – 2 = 3, 5 – 3 = 2.
- The player then asks another player for a specific card rank. For example: "Sue, please give me a 6."
- If the other player has the requested card, she must give the person her card.
- If the person asked doesn't have that card, he/she says, "Go fish."
- The player then draws the top card from the draw pile.
- If he/she happens to draw the requested card, he/she shows it to the other players and can put the fact family on the table. Otherwise, play goes to the next person.
- Play continues until either someone has no cards left in his/her hand or the draw pile runs out. The winner is the player who then has the most sets of fact families.

Map Activity

Some of the animal suspects live in many parts of the world while some of the other animal suspects can only be found on one or two continents.

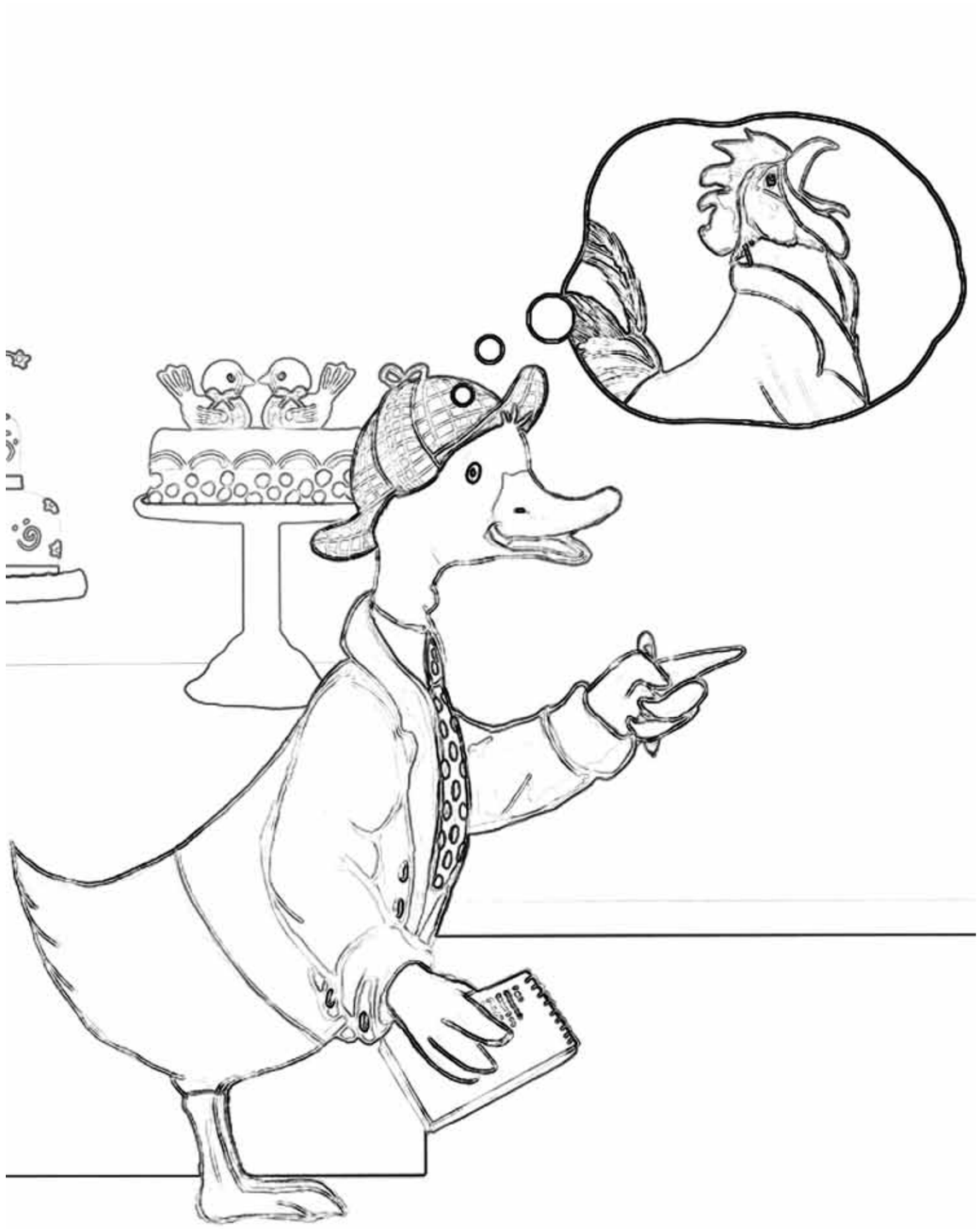
Kangaroos live in Australia. Find Australia on the map.

Elephants and tigers live in Africa and Asia. Find Africa and Asia on the map.

Moose live in cold climates in North America, Europe, and Asia.

Monkeys live in tropical areas in Central and South America, Africa and Asia

Coloring Pages



Glossary

Word	*Definition*	*Part of Speech*	*Spanish*
antler	a branched horn on an adult deer that is made of bone and is grown and shed annually	noun	cuernos
arm	the upper arm or forelimb of a vertebrate	noun	brazo
baker	one who bakes	noun	panadero
beautiful	having beauty, pleasing or satisfying, excellent	adjective	lindo
big	large in size, height, or amount; Dolch Sight word, Pre-K, K	adjective	grande
bird	a warm-blooded, feathered vertebrate of the class Aves	noun	pájaro
breakfast	the first meal of the day	noun	desayuno
cake	a sweet, soft, baked food	noun	pastel
case	a certain situation or occurance	noun	caso
claw	a pointed, usually curved, nail on the foot of an animal	noun	garra
contest	a competition or race for a prize	noun	concurso
crawl	to move slowly with the body near the ground	verb	arrastrarse, meterse
crime	an offence punishable by law	noun	crimen
crow	the sound a rooster makes at sunrise, usually to claim his territory	verb	cantar
dark	having a lack of light	adjective	oscuro
deductive	based on logical inferences	adjective	deductivo
detective	one who investigates and solves crimes	noun	detective
difficult	not easily done, needing much skill	adjective	difícil
drag	to pull along, to haul	verb	arrastrar
duck	a small, web-footed swimming bird	noun	pato

Word	*Definition*	*Part of Speech*	*Spanish*
elephant	a large pachyderm with a long trunk	noun	elefante
enter	to go into	verb	entrar
escape	to slip away without detection	verb	escapar
explain	to make clear or make known	verb	explicar
fact	something true, known by obsevation or experience	noun	hechos
feathers	a bird's body covering	noun	plumas
finish	to complete	verb	terminar
flour	a powder used in baking, often made of ground wheat	noun	harina
footprint	the mark left by a foot or shoe	noun	huella
good	excellent, right, satisfactory	adjective	bueno
grab	to take or seize by a sudden motion or grasp	verb	agarra
ground	the solid part of the Earth's surface	noun	tierra
hair	fine thread-like filaments that grow on the skin of mammals	noun	pelaje
hand	the palm, fingers, and thumb on the end of a person's arm	noun	mano
handprint	the mark left by a hand	noun	huella de mano
happen	to occur or take place	verb	suceder
high	a long way from the ground	adjective	alto
hog	to hoard, to keep for one's self	verb	ser el glotón
hop	move by jumping with two or all feet at once	verb	saltar
jump	to move ones body off the gound with legs ; Dolch Sight word, Pre-K	verb	saltar, brincar
logic	The formal structure for reasoning.	noun	lógica
long	extended, occupying a great distance	adjective	larga
monkey	a small to medium-sized primate, usually with a long, prehensile tail	noun	mono

Word	*Definition*	*Part of Speech*	*Spanish*
moose	a large mammal in the deer family, known for its extended antlers	noun	alce
mouse	a kind of small rodent	noun	ratona
observe	to watch, to monitor and and gain information about	verb	observar
odd	strange, unusual	adjective	extraño
one	a single object, a number; Dolch Sight word, Pre-K	adjective	uno
paw	the foot of an animal that has claws	noun	pata
pig	a small swine with a flat snout	noun	cerdito
point	to gesture or indicate, to guide someone's attention toward	verb	señalar
raccoon	an American mammal with a ringed tail and mask-like black markings on its face	noun	mapache
reason	to engage in a process that leads to a conclusion or inference using known facts or assumptions.	verb	razonar
rooster	a type of bird, a male domestic fowl	noun	gallo
rule out	to exclude something as a possibility	verb	ser descartado
sill	a shelf at the base of a window or doorway	noun	umbral
small	limited size, opposite of large	adjective	pequeño
spill	to shed or scatter, to allow to fall over	verb	derramar
squeak	to make a short, high noise or speak in a high pitched voice (usually when excited)	verb	chillar
steal	to rob, to take something that belongs to someone else	verb	robar
strand	a single fiber or thread, a filament	noun	mechón

Word	*Definition*	*Part of Speech*	*Spanish*
subtract	to remove, take away from	verb	descartar
sunrise	dawn, the time in the mornng when the sun appears over the Eastern horizen	noun	descartar
suspect	a person who is thought to have committed a crime	noun	sospechoso
swan	a large aquatic bird with a long, slender neck	noun	cisne
swing	to move to-and-from, to oscillate while dangling from a fixed point	verb	balancear
tail	(life science) the rear, elongated part of many animals, used for balance, combat, communication, mating displays, fat storage, movement and steering	noun	cola
thief	someone who steals	noun	ladrón
tiger	a large, meat-eating member of the cat family	noun	tigre
trail	a sign that shows the passage of someone or something	noun	huella
tree	a type of plant with a permanent woody stem	noun	árbol
watchmen	someone employed to guard a building or area, particularly at night	noun	velador
window	a clear, glass in a house or vehicle	noun	ventana

Answers

Silly Sentences

Mouse couldn't have taken the cake because it would have been too big for him to carry.

Rooster couldn't have taken the cake because he was crowing at sunrise when the cake was stolen.

Elephant could only leave through the doors but the doors were locked.

Swan couldn't have taken the cake because the thief left hairs and birds have feathers.

Moose would have knocked over all the pots and pans with his antlers.

The thief dragged his tail through flour.

Pig couldn't be the thief because he doesn't have a tail long enough to drag.

The thief had to leave through the window but the cow and the kangaroo were too big to jump through it.

The thief left handprints, but tigers have claws, not hands.

The thief had to swing from tree to tree to get away. Raccoons climb trees but they don't swing from one to another.

Word Search

	A	B	C	D	E	F	G	H	I	J
1				D			K			
2	M	E	L	E	P	H	A	N	T	
3	O			D	R	O	N	P	I	G
4	O	M	O	U	O	R	G		G	M
5	S			C	O	S	A		E	O
6	E		D	T	S	E	R		R	U
7		S	U	I	T	C	O	W		S
8		W	C	V	E		O			E
9	C	A	K	E	R					
10		N	R	A	C	C	O	O	N	

CAKE	9,A
COW	7,F
DEDUCTIVE	1.D
DUCK	6,C
ELEPHANT	2,B
HORSE	2,F
KANGAROO	1,G
MOOSE	2,A
MOUSE	4,J
PIG	3,H
RACCOON	10,C
ROOSTER	3,E
SWAN	7,B
TIGER	2,I

Math: Probability

1. What are the chances of eating a red first?
   Words: 2 (red) out of 15 (total)
   Fraction: 2/15
2. What are the chances of eating a brown first?
   Words: 1 (brown) out of 15 (total)
   Fraction: 1/15
3. What are the chances of eating a blue first?
   Words: 3 (blue) out of 15 (total)
   Fraction: 3/15
4. What are the chances of eating a purple first?
   Words: 2 (purple) out of 15 (total)
   Fraction: 2/15

What Are The Chances?

Chances of it being a farm animal: cow, pig, horse, or rooster so four out of twelve (4/12)

Chances of choosing the thief to start: one out of twelve (1/12). As the number of animal suspects got smaller, the chances of finding the thief got easier. It got down to 1 out of 2 or 1/2.

Number Families: a Dozen & a Baker's Dozen

A Dozen:	1 x 12 = 12	3 x 4 = 12	2 x 6 = 12
	12 x 1 = 12	4 x 3 = 12	6 x 2 = 12
	12 ÷ 1 = 12	12 ÷ 3 = 4	12 ÷ 2 = 6
	12 ÷ 12 = 1	12 ÷ 4 = 3	12 ÷ 6 = 2
A Baker's Dozen:	1 + 12 = 13	6 + 7 = 13	5 + 8 = 13
	12 + 1 = 13	7 + 6 = 13	8 + 5 = 13
	13 — 1 = 12	13 — 6 = 7	13 — 5 = 8
	13 — 12 = 1	13 — 7 = 6	13 — 8 = 5

Deductive Reasoning

	lemon	chocolate chip	oatmeal raisin	M&M	
Jason		1		1	loves all, especially chocolate
Marie		1	1		doesn't like lemon, loves chocolate
Erin	1		1		can't eat M&M coating
left	1	0	0	1	Jason ate because he loves all cookies, Marie doesn't like lemon and Erin can't eat M&M coating

Appendix A—"What Children Know" Cards

Question: My answer: This information is correct! This information is not correct; can you find the correct information?	Question: My answer: This information is correct! This information is not correct; can you find the correct information?
Question: My answer: This information is correct! This information is not correct; can you find the correct information?	Question: My answer: This information is correct! This information is not correct; can you find the correct information?

Appendix B—Venn Diagram

Compare and contrast two of the animal suspects.