Word Magic
Teacher Guide

Summary

- Coding skill level: **Beginner**
- Recommended grade level: **Grades 3-8 (U.S.), Years 4-9 (U.K.)**
- Time required: **50 minutes**
- Number of modules: **1 module**
- Coding Language: **Tynker Blocks**

Teacher Guide Outline

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- How to Prepare

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- Overview
- Getting Started (20 minutes)
- DIY Module (30 minutes)
- Extended Activities

Going Beyond an Hour
- Do More With Tynker
- Tynker for Schools

Help

Welcome!

In this cross-curricular lesson, students will apply Reading and coding concepts as they create a captivating project that showcases a word's definition, origin, root words, and more! Students will begin by completing a worksheet to help them collect information about a word of their choosing before they start coding. Once students finish the worksheet, they're ready to move on to the "Word Magic" DIY module. The DIY module includes a step-by-step tutorial, 2 sample projects, code blocks to help students get started, and ideas on how students can showcase their word. Time permitting, students will reflect on today's coding adventure as they complete the "Extended Activities" section of this teacher guide.

Note: It is recommended that you complete this lesson in two different parts (as noted in the "How to Prepare" section of this teacher guide). This project is also open-ended. Students are provided suggestions on how to get started, but need to choose which code blocks to use.

How to Prepare

This activity is designed for self-directed learning. Your role will be to help students individually and facilitate as students complete the coding activities on their own. The best way to prepare is to:

1. **Familiarize yourself with the material.** After selecting your Tynker lesson (Word Magic), read through the teacher guide and complete the activity before assigning it to students. This will allow you to troubleshoot anything in advance and plan for potential questions from your students.
2. **Sign up for a teacher account.** Creating a free teacher account will allow you to access teacher guides, answer keys, and tons of additional resources. You'll also be able to create free accounts for your students, monitor their progress, and see their projects.
3. **Create student accounts.** From your teacher account, you can easily create free student accounts for all your students. This will allow them to save their projects and progress, so they can continue coding when they get home!
4. **Complete this lesson in two different parts.** Please refer to the "Getting Started" section of this teacher guide.

Activity
Overview

Objectives
Students will...
- Research a word to find out its definition, root word(s), and origin
- Demonstrate an understanding of Reading concepts such as prefix, root word, suffix, definition, syllable, and parts of speech (for example, verb, noun, adjective)
- Apply coding concepts and use code blocks to create a project called "Word Magic"

Materials
- **For web:** Computers, laptops, or Chromebooks (1 per student)
- **For mobile:** iPads or Android tablets (1 per student)

Vocabulary
- **Code:** The language that tells a computer what to do
- **Actor:** A Tynker character or object that can talk and interact with others
- **Costumes:** Different appearances for an Actor
- **Stage:** The background of the project where the Actors are placed
- **Sequence:** The order in which steps or events happen
- **Command:** A specific action or instruction that tells the computer to do something
- **Loop:** An action that repeats one or more commands over and over
- **Counting loop:** A loop that repeats one or more commands a specific number of times.
- **Prefix:** The beginning of a word
- **Root word:** A word that has nothing added to the beginning or the end
- **Suffix:** The ending of a word
- **Syllable:** The smallest unit of sound in a word — for example the word syllable has three syllables, **syl·la·ble**
- **Noun:** A word used to name a person, place, thing, or idea
- **Adjective:** A word that describes or modifies a noun
- **Verb:** A word that expresses actions or states of being

U.S. Standards
- **CCSS-ELA:** RI.3.7, RF.3.4, RF.3.4.A, SL.3.1, RF.4.4.A, RF.1.4.A, RF.4.4, SL.4.1, RF.5.4.A, RF.5.4, SL.5.1, RI.6.4, RI.6.7, SL.6.1, SL.7.1, SL.8.1
- **CCSS-Math:** MP.1
- **CSTA:** 1B-AP-11, 1B-AP-14, 1B-AP-15, 1B-AP-17, 2-AP-13, 2-AP-16, 2-AP-17
- **CS CA:** 3-5.AP.13, 3-5.AP.16, 3-5.AP.17, 6-8.AP.13, 6-8.AP.16, 6-8.AP.17
- **ISTE**: 1.1.c, 1.1.d, 1.4.d, 1.5.c, 1.5.d, 1.6.b

U.K. Standards
National Curriculum in England (computing):

- **Key Stage 2 (Years 4-6)**
  - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
  - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

- **Key Stage 3 (Years 7-9)**
  - Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability
  - Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns

Getting Started (20 minutes)
Complete this lesson in two different parts:

<u>**Part 1:**</u>
- Tell students that they're going to use Tynker in an upcoming activity to showcase the story of a word! Inspire your students by playing the provided sample projects. Here's a screenshot image of what they look like:
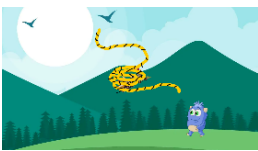
- Next, ask students to think of a word they like. Do students need inspiration? Refer to the "Help" section of this teacher guide to find GreatSchools.org words that are grouped by grade level.
- Once students have chosen a word, ask them to write it on the classroom board. *Optional:* Add 2-3 additional words of your choosing. Students can refer to this list as needed.
- Before students start coding, they need to complete the "Word Magic" assignment (located on the next page) for homework or as an in-class activity.

Name _____
Date   _____

Word Magic

Directions: Answer the questions below, then begin brainstorming ideas for how you want to present your project.

Questions:

1. What word are you going to use for your project?

   _____

2. What is the definition of your chosen word?

   _____

3. Some words are made up of different parts that we call 'roots.' Does your word have different parts? What do they mean?

   _____

   _____

4. Is your word a noun, verb, adjective, or something else?

   _____

5. How many syllables does your word have?

   _____

6. Use your chosen word in a sentence:

   _____

   _____

7. Use the back of this paper to brainstorm ideas for your project. Here are some ideas to think about: Do you plan to animate the letters of your word or create a story about your word? What might some of your Actors look like?

Part 2:
Once you finish checking your students' worksheet, they're ready to get started on the "Word Magic" DIY module. Remind students that they're going to use Tynker to bring their favorite word to life through coding!

DIY Module (30 minutes)

This lesson has one DIY (do-it-yourself) module. Facilitate as students complete the Word Magic module on their own:

Word Magic (DIY)

- In this DIY, students will create an open-ended project that showcases a cool word and its story! **Note:** This project is open-ended. Students will need to determine which code blocks to use.
- **Important:** Remind students that they *do not* need to include all the information from their "Word Magic" worksheet into their project. We don't want to restrict their creativity, so how they choose to showcase their chosen word is entirely up to them.
- Do students need extra inspiration? Direct your students' attention to the 2 sample projects on Page 1 of the tutorial. Here's what it looks like:
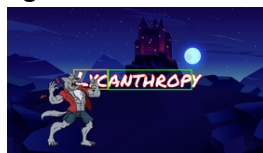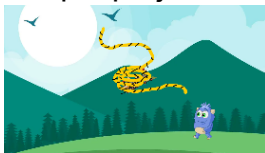

- Make sure students add a background and Actors to their project. Do students want to draw their own artwork? Direct their attention to the Vector Drawing Tool, where they can draw fun, cartoony shapes and precise lines:
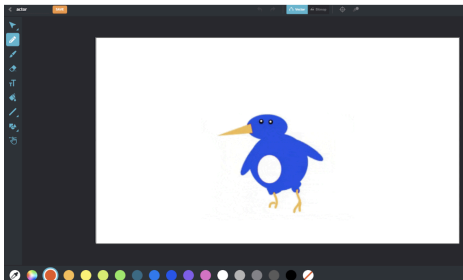
  Do students need help understanding what each tool does? Here's a brief overview:

Tool Name	Image	Description
Selection		Select anything on the Stage. Move the object, rearrange its layer order, flip it, and more.
Pencil		Draw freehand using the Pencil tool. This tool is best for creating lines and borders.

Brush		Draw freehand using the Brush tool. This tool is best for drawing complex shapes as well.
Eraser		Remove drawn objects.
Text Tool		Add labels, draw text, and choose your font/size.
Paint Bucket		Fill shapes in your drawings fast.
Lines		Draw line segments or enclosed shapes.
Shapes		A collection of icons, shapes, and clipart to use in the project.
Move Canvas		Click and drag to pan around the canvas.
Zoom Controls		Zoom in and out. The (+) button zooms in and the (-) button zooms out. Click the square to choose a Zoom Level.

- Do students want images to choose from? Direct their attention to the assets from Tynker's Media Library, or they can upload their own image! Here's what the Media Library icon looks like:

- Are students struggling? Direct their attention to these links, which include more details on Tynker features:
  - Text Tricks — Explore how to use dialogue and speech bubbles
    - Link address: https://www.tynker.com/blog/text-tricks/
  - The Drawing Tool — Learn how to create custom artwork, even text
    - Link address: https://www.tynker.com/blog/tynkers-vector-drawing-tool/
  - Animation Tool — Explore frame-based animation
    - Link address: https://www.tynker.com/blog/animation-tool/
- Did students finish early? Ask them to create another project about a different word. If students are struggling to find a new word, ask them to choose a word from the classroom board, vocabulary terms, or the classroom word wall.

Extended Activities

Show and Tell

- Encourage students to share their project(s) with a neighbor and ask them to explain why they like that word.

Trivia

- Note that this activity will require advanced preparation.
- Gather 5 of your student's words and their definitions. Next, group students into teams and ask them to try and guess which word goes with the correct definition. Give a hint and ask them to pay attention to prefixes and suffixes. Which team can correctly guess the most words?

Going Beyond Word Magic

If your students enjoyed Word Magic, they're sure to enjoy the rest of what Tynker has to offer! Tynker offers a complete premium solution for schools to teach computer science. Over 400 hours of lessons are available to take K-8 students from block coding to advanced text coding. We offer tons of resources for teachers, including comprehensive guides, free webinars, and a forum to connect with other educators.

Do More with Tynker

With Tynker, kids don't just acquire programming skills—they explore the world of possibilities that coding opens up. Tynker has several interest-driven learning paths that make coding fun, both inside and outside the classroom:

- **Coding and Game Design** — Your students can use Tynker Workshop, a powerful tool for crafting original programs to make games, stories, animations, and other projects. They can even share their work with other kids in the Tynker Community.
- **Robotics** — Tynker integrates with connected toys, including Lego WeDo robotics kits, so kids can see their code come to life.
- **Minecraft** — Tynker integrates with Minecraft so your students can learn coding through a game they love. Tynker offers skin and texture editing, as well as a custom Mod Workshop that lets kids try their original code in Minecraft.
- **Artificial Intelligence** — Webcam projects powered by AI put your students at the center of the action! Students can create interactive Snapchat-style costumes, hand-tracking apps, activity games, and so much more.

Tynker for Schools

Used in over 90,000 schools, our award-winning platform has flexible plans to meet your classroom, school, or district needs. All solutions include:

- Grade-specific courses that teach visual coding, JavaScript, Java, Python, and robotics

- A library of NGSS and Common Core compliant STEM courses that are great for project-based learning
- Automatic assessment and mastery charts for whole schools and individual classes and students
- Easy classroom management with Google Classroom and Clever integration
- Professional training, free webinars and other teacher training resources

Need help getting Tynker started at your school? Contact us to learn more about teaching programming at your school with Tynker!

Help
Need help? Below you'll find answers to frequently asked questions about using Word Magic.

How do I prepare for Word Magic?
1. **Familiarize yourself with the material.** After selecting your Tynker lesson (Word Magic), read through this teacher guide and complete the activity before assigning it to students. This will allow you to troubleshoot anything in advance and plan for potential questions from your students.
2. **OPTIONAL: Sign up for a teacher account.** Although an account is NOT required, creating a free teacher account will allow you to access teacher guides, answer keys, and tons of additional resources. You'll also be able to create free accounts for your students, monitor their progress, and see their projects.
3. **OPTIONAL: Create student accounts.** From your teacher account, you can easily create free student accounts for all your students. This will allow them to save their projects and progress, so they can continue coding when they get home! Again, this is not necessary to complete the Word Magic lesson.

What is a helpful dictionary my students can use?
- Here's a reliable online dictionary students can use:
  https://www.merriam-webster.com/

Do you have examples that I can show my students?
Here's a list of sample words from GreatSchools.org that your students can use as inspiration:

Grade 3 Sample Word List				
Word	**Origin**	**Part of Speech**	**Sentence**	**Phonetic Pronunciation**
continent	This word originates from a Latin word.	noun	Asia is usually considered the largest continent on Earth.	KAHN-ti-nent

dangle	This word's origin is likely Scandinavian.	verb	Aya likes to sit next to pools and dangle her legs in the water.	DANG-gul
prank	This word's origin is uncertain but likely Germanic.	noun	Yannick played a prank on his family by hiding all of their shoes.	prank
experience	This word comes from Middle English, from Old French, originally from Latin.	noun	Mr. Singh would not soon forget the experience of seeing a fireworks show up close.	eks-PEER-ee-ens
typical	This word came through Latin from a Greek origin.	adjective	Warm fur is typical of mammals.	TIH-pi-cul
shiver	This word's origin is disputed, but it has a Germanic homonym.	verb	Uncle Chester put on his jacket so that he would not shiver in the cold.	SHIH-vur
unusual	This word combines an Old English prefix with a Latin root.	adjective	Ms. Singh's refusal of a cookie was unusual.	uhn-YOO-zhu-ul
gist	This word's origins are Latin, but its form is distinctly French.	noun	Margie had never read a recipe, but she got the gist of cooking from watching her parents in the kitchen.	JIST
agreeable	This word comes from Middle English, from Old French.	adjective	I find Jillian agreeable; it's pleasant to work with her on group projects.	uh-GREE-uh-bul
scatter	This word comes from Middle and Old English and appears Germanic.	verb	Leighton was asked to scatter flower petals at her cousin's wedding.	SCAT-ur

Grade 4 Sample Word List				
Word	**Origin**	**Part of Speech**	**Sentence**	**Phonetic Pronunciation**
border	This word has come through Middle English from Old French but is Germanic in origin.	noun	Sandeep doodled a geometric border around the edges of his worksheet.	BOHR-dur
convince	This word is based on a Latin word.	verb	Julia had to convince her friend Nasir to watch the scary movie with her.	cun-VINS

rarely	This word combines a Latin/French root with a Germanic suffix.	adverb	Javier rarely visits the park anymore, since he's been busy studying for a test.	RER-lee
disappointed	This word originates from Middle French.	adjective	Emma was disappointed that the bakery had run out of her favorite cookies.	dis-uh-POYN-ted
passage	This word first hails from Old French.	noun	Roland marked a difficult passage in his textbook with a highlighter.	PASS-uj
scarce	This word came through Middle English from early French, but its exact (Latin?) origin is unknown.	adjective	Flour was scarce in the valley after a sickness ravaged much of the year's wheat crop.	skairs
develop	This word comes from French, from Latin, but ultimately was borrowed from Proto-Germanic.	verb	Most babies start to develop speech when they are about one year old.	di-VEL-up
flexible	This word can be traced back to Latin.	adjective	After practicing gymnastics for several years, Jelisa took pride in being flexible.	FLEK-si-bul
prefer	This word came through Middle English and regional early French from Latin.	verb	I prefer chocolate desserts to fruity desserts, with brownies being my absolute favorite.	pri-FUR
tradition	This word came through Middle English and Old French from Latin.	noun	Jett continued his family's tradition by applying to medical school, just like his father and grandfather.	truh-DI-shun
Grade 5 Sample Word List				
Word	**Origin**	**Part of Speech**	**Sentence**	**Phonetic Pronunciation**
primary	This word is a borrowing from Latin.	adjective	Painters combine primary colors on a palette to create many more colors.	PRY-mair-ee
revolt	This word was borrowed from French, itself borrowed from Italian. Its origins are Latin.	verb	When the masons weren't paid for their work, they staged a revolt against the crown.	ri-VOLT

cease	This word came through Middle English and French from Latin.	verb	Mrs. Higgins called for her rowdy class to cease talking so that they could begin.	sees
gigantic	This word comes from Ancient Greek.	adjective	Giana gasped at the sight of the interior of the gigantic cathedral.	jy-GAN-tik
decade	This word came through English and French from Latin, but it is derived from a Greek word.	noun	It had been a decade since Arturo had seen his cousin, and he was excited to make up for lost time.	DECK-aid
abolish	This word came through Middle English and French from Latin.	verb	After public outcry, the city council voted to abolish the unpopular law.	uh-BALL-ish
source	This word came through Middle English and French from Latin.	noun	Clara traced the stream of water back to its source.	sors
immigrate	This word was borrowed from Latin.	verb	Tim's parents had immigrated to the country before he was born.	IM-mi-grait
briskly	This word's origin is uncertain; its root may have been a French word modified by Celtic influence. Its suffix is Germanic.	adverb	Luka didn't have much time for lunch, so he walked briskly to the sandwich shop and back.	BRIS-klee
huddle	This word can be traced back to Middle English and is likely Germanic.	verb	We had to huddle together around the fire to stay warm.	HUH-dul

Grade 6 Sample Word List

Word	Origin	Part of Speech	Sentence	Phonetic Pronunciation
thesis	This word is found in Latin as a borrowing from Ancient Greek.	noun	Nigel wrote his graduate thesis on the change in temperature of the Mediterranean over time.	THEE-sis
unanimous	This word comes from a Latin word.	adjective	The vote to reinstate the book club was unanimous.	yu-NAN-i-mus
declare	This word came through Middle English and French from Latin.	verb	Quinn declared her intent to run for student council president.	di-KLAIR

catastrophe	This word comes from Ancient Greek.	noun	The earthquake was a catastrophe, causing widespread structural and fire damage.	cuh-TASS-tro-fee
unique	This word is borrowed from French.	adjective	Roger was unique in his class for being the only student with red hair.	yu-NEEK
lofty	This word is attested in Middle English and is Germanic in origin.	adjective	Leroy's parents warned him that his dream of becoming famous was a lofty goal.	LOFF-tee
variable	This word came through Middle English and French from Latin.	adjective	The winds are often variable and unpredictable this time of year.	VAIR-ee-uh-bul
drastic	This word comes from Ancient Greek.	adjective	Turning his frozen computer off and on again was a drastic measure that would lose his work, but Mo had little choice.	DRASS-tik
strategy	This word comes from Ancient Greek.	noun	The basketball team came up with a strategy to counter their opponents.	STRA-te-jee
origin	This word came through Middle English and French from Latin.	noun	Mr. Neng explained the origin of tea to his world history class.	OH-ri-jin

Grade 7 Sample Word List				
Word	**Origin**	**Part of Speech**	**Sentence**	**Phonetic Pronunciation**
bias	This word comes from Middle French, possibly from an Old Occitan word of unclear origin.	noun	Sneha took care to write her report without bias and cite authors from both sides of the debate.	BY-us
ludicrous	This word comes from a Latin word.	adjective	Neveah found her little brother's antics ludicrous.	LOO-di-krus
condor	This word is borrowed from Spanish but originates from Quechua.	noun	Otto lifted his binoculars to better see the adult condor soaring in the distance.	KAHN-dor
bamboozle	This word's origin is unclear but seems to be playful English vernacular.	verb	I fear that I'm easy to bamboozle, because I'm gullible and easily distracted.	bam-BOO-zul

abdicate	This word is a borrowing from Latin.	verb	As news of the scandal circulated the countryside, the duke felt pressure to abdicate his title.	AB-di-kayt
sovereign	This word came through Middle English and French from Latin.	adjective	The people declared their will to be recognized as a sovereign nation.	SAH-vuh-rin
naive	This word is borrowed directly from French.	adjective	I've heard others call Emil naive behind his back because he had a sheltered childhood.	nah-EEV
libel	This word came through Middle English and French from Latin.	noun	Mr. Sakai dismissed the rumors about him as baseless libel.	LY-bel
dawdle	This word's origin is unknown.	verb	"No time to dawdle," Dave told his sons, "or else we'll be late for dinner!"	DAW-dul
chronological	This word is made of many Greek pieces.	adjective	Tom listed the prior work experience on his resume in chronological order.	kra-nuh-LAH-ji-kul

Grade 8 Sample Word List

Word	Origin	Part of Speech	Sentence	Phonetic Pronunciation
audacious	This word comes through French from Latin.	adjective	Martina was an audacious skier, daring some of the most difficult slopes.	aw-DAY-shus
boycott	This word was an English surname.	verb	Carl encouraged his friends to boycott the company for its unfair treatment of its workers.	BOY-kaht
novice	This word came through Middle English and French from Latin.	noun	Shanchao was taken on as a novice woodcarver, apprenticed to a master.	NAH-vis
abhor	This word came through Middle English and French from Latin.	verb	My parents abhor many genres of modern music, claiming that classic rock was superior.	uh-BOR
pseudonym	This word comes from a French borrowing of a Greek word.	noun	Jalil wasn't comfortable publishing unless it was credited under a pseudonym.	SOO-do-nim

bizarre	This word comes from a French borrowing of an Italian word.	adjective	My father finds the modern slang that my friends use to be bizarre.	bi-ZAHR
reverberate	This word comes from a Latin word.	verb	Norton watched the strings of the guitar reverberate thanks to a slow-motion camera.	ri-VUR-bur-ayt
apathy	This word came through English and French from Latin, but it is derived from a Greek word.	noun	After completing all of her exams, Lisha felt apathy for the last few days of class.	A-puh-thee
belligerent	This word comes from a Latin word.	adjective	I'd never known Jason to be belligerent, but he got more angry last night than I'd ever seen him before.	bel-LIH-jur-ent
rebuff	This word comes from a French borrowing of an Old Italian word.	verb	Watching Julio rebuff Anita's confession last week was uncomfortable for all parties.	ree-BUFF

Who is this activity for?

Word Magic is intended for students in grades 3-5 (U.S.) or years 4-6 (U.K.).

What will my students learn?

Students will reinforce English concepts, combine creativity, and apply coding concepts to create a fun project called "Word Magic." Additionally, students will expand on their project while experimenting with new code blocks. In this process, students will develop debugging and logical reasoning skills.

How do my students code their Actors?

The Word Magic DIY module includes a workspace for students to code their project. The section on the left is a tutorial tab that provides step-by-step directions, describes what is happening for each step, and provides code blocks. Tell students to follow the step-by-step instructions and drag blocks to the center coding area.

What do the code blocks do?

Below is a description of the provided tutorial code blocks. **Note:** This is an open-ended project, where students are encouraged to explore and use additional code blocks.

Tutorial code blocks:

Code Blocks	What They Do
on start	Run the code attached to this block when the Play button is clicked.

repeat 10	Repeat the code inside this loop a specified number of times (e.g., 10).
wait 1 secs	Pause the current script for a specific number of seconds (e.g., 1).
say Hello ⊖ ⊕ for 2 secs	Make the Actor say the specified text for a specific number of seconds (e.g., 2).
say Hello ⊖ ⊕ for 2 secs with style bottom message box color for text: #eeeeee border: #ffffff background: #000000 font style normal 18 Arial,Helvetica,sans-serif	Display a speech bubble with the specified text and formatting for a given amount of seconds (e.g., 2).
next costume	Make the Actor change to the next costume.
switch to costume	Change the Actor's Costume to the specified one.
next background	Change the background to the next background.
switch to background	Change the background to the specified Costume.
move 10 pixels	Move the Actor a specified number of units (e.g., 10) in the direction it is facing.
point in direction 90 degrees	Point the Actor at the specified degree (e.g., 90).
glide 1 secs to x: 0 y: 0	Move the Actor to the specified x- and y-coordinates (e.g., -276, -52) within the specified seconds (e.g., 1).
turn ↻ 15 degrees	Rotate the Actor to the right (clockwise) by the specified value (e.g., 15).

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turn ↺ 15 degrees	Rotate the Actor to the left (counterclockwise) by the specified value (e.g., 15).
play sound	Play the specified sound file.
play sound until done	Play the specified sound file and wait until it is finished playing.

How can I contact the Tynker support team?

If you have any issues or questions, send us an email at support@tynker.com.