Smart Home Devices

By Vikunth Anand

NOTES

- NOTE TITLE SIZE FOR EACH section, be consistent. On slides with the title on the blue line, make the size 14 (Default is 12)
- Add details and pictures to slides
- Explain! This lesson is to explain smart home devices, it won't necessarily show how to use/set up each device on apps but it will introduce each one, why they are beneficial and a overview of how you would operate them.
- Make as many slides as you need to fully explain each topic – don't have paragraphs on one slide
- USE PICTURES! It will help the lesson to be easier to understand and follow along with

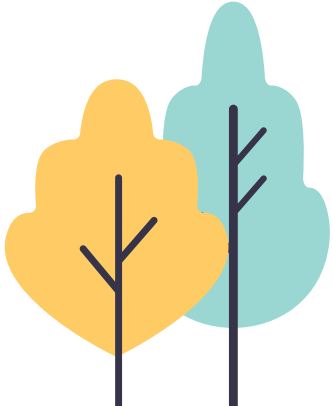# TABLE OF CONTENTS

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Thermostats

What advantages do smart thermostats provide? How do I use them?

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What benefits do smart home speakers provide? How do they help?

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Lights & Outlets

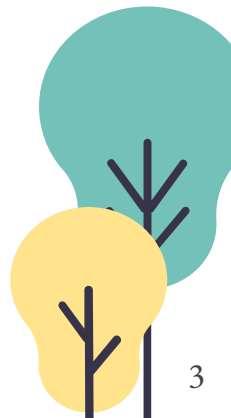How do smart lights and outlets work? How do they help? How do you control them?

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Security Systems

How do smart doorbells/camera systems enhance my security and help make my home safe?

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Q&A Session

You will be able to ask us any questions you have about the lesson!

Overview

01

What are smart home devices and what benefits do they bring?

- Smart home devices – Enhances general features of your house

- Ranges from lights, timers, & smart switches to advanced security systems that can protect your whole home

- Controls household appliances using a smartphone or tablet

02

Smart Thermostats

What advantages do smart thermostats provide? How do I use them?

What are Smart Thermostats?

- Smart thermostats maintain home temperatures using a smartphone.

- They can replace old thermostats and are not too difficult to install.

- You can set schedules, monitor usage, and change temperatures from anywhere!

  - You can set it to Eco Mode when away to conserve energy and turn it off right before you get home to arrive to a comfortable environment.

- Smart thermostats may reduce energy bills by up to 23%.

- **Popular smart thermostats include...**

Google Nest Thermostat

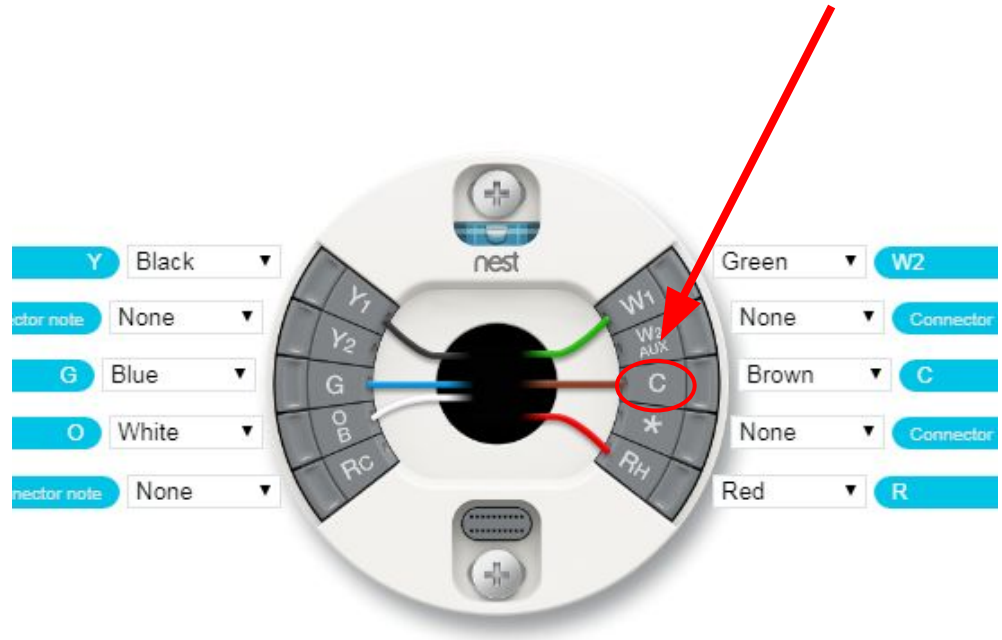Ecobee Smart Thermostat

Amazon Smart Thermostat

What is Eco Mode?

- Eco Mode is a feature on smart thermostats that allows you to save energy when switching between temperatures.

- You can manually change your thermostat to Eco Mode.

- Essentially, it allows the thermostat to sense if you have left the house and sets itself to an Eco Temperature to save energy! It does this by checking phone location.

- Eco can also be **manually** turned on from the corresponding app.

What is a C-Wire?

- Short for "common wire"

- Provides constant power to thermostat

- Necessary if thermostat…

    - has power issues/battery often drains

    - is incompatible with your heating/cooling system

- Sometimes already installed in your home

What is a C-Wire?

- The app for your thermostat will tell you during setup if you need a C-Wire
  - Before buying a thermostat, you can check its compatibility with your heating/cooling system by searching online
    - Google Store has a survey for checking Nest thermostat compatibility

Compatibility Checker

Welcome to Google Nest. This tool will help you determine if a Nest thermostat is compatible with your heating and cooling system.
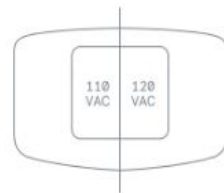
Take a look at your thermostat.

The Nest thermostat isn't compatible with your system if any of these things are true.

Your thermostat has stranded wires.

Your thermostat has thick, stranded wires connected by wire nuts.

Your thermostat is labeled 110V or 120V.

110 VAC   120 VAC

Get started

Continue

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Look at your wire labels.

Select which ones have connected wires.

R	W	Y	AUX
Rh	W1	Y1	O/B
Rc	W2	Y2	O
C	E	G, G1	B

⊕ View more wires

ⓘ Some thermostats have 2 labels on each connector. To see which label you should use, check Nest Help.
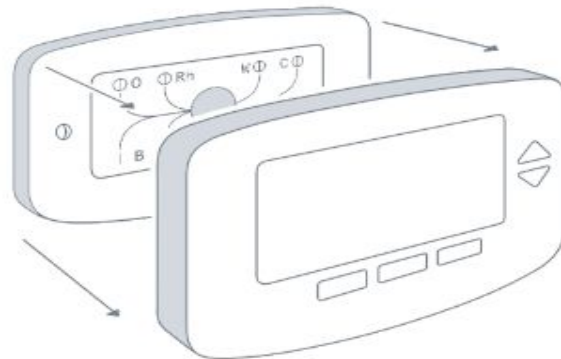
Did you enter all of your wires?

Yes, continue

First things first.

Power off your system by using a switch or turning off power at the fuse box. Remove the cover from your current thermostat. Some covers just pop off. Others need to be unscrewed.

Continue

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Any Questions?

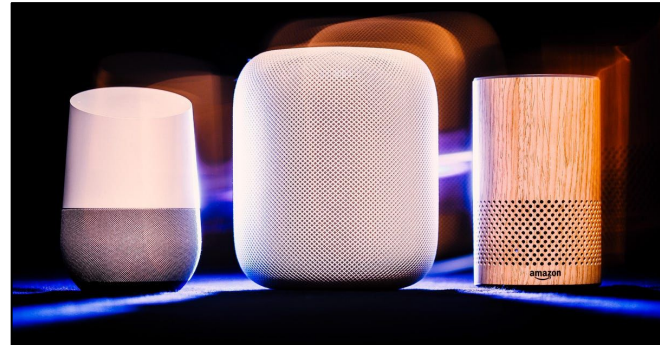We just finished learning about smart thermostats!

Smart Home Speakers

03

What are smart home devices and what benefits do they bring?

- Smart home speakers are speakers that can be controlled with your voice. This is done using a "**virtual assistant**" (Hands-free activation!)

- Smart speakers can be installed anywhere in your home.

- They are meant to provide ease to your life, through their ability to perform tasks at the command of your voice!
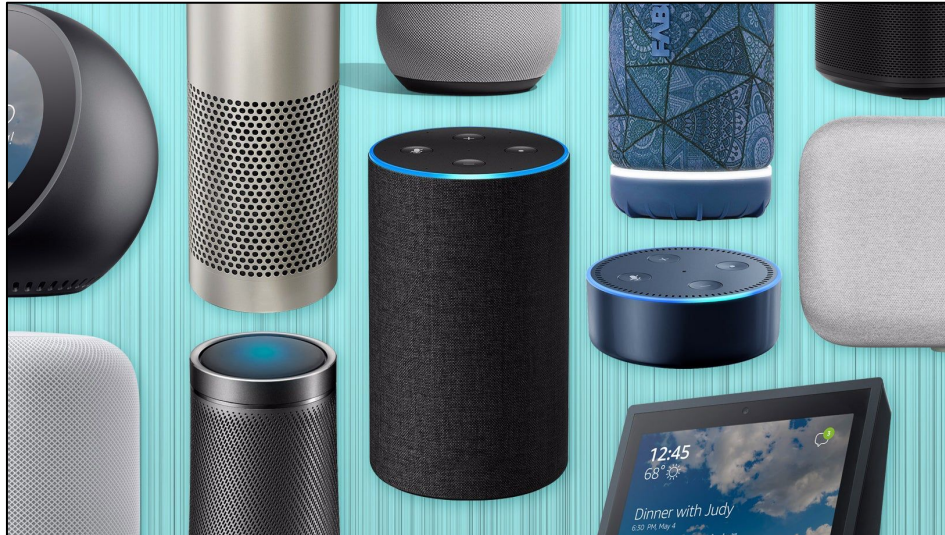
- Smart speakers' uses include:
  - Answering questions for you
  - Performing different automated tasks
  - Controlling compatible smart devices
  - Turning on lights
  - Playing music or even telling you the weather!

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- Some examples of smart home speakers include Google Home, Alexa, Siri, Cortana, Google Assistant, etc.

Any Questions?

We just finished learning about smart home speakers!

04

Smart Lights & Plugs

How do smart lights and plugs work? How do they help? How do you control them?

What are smart lights and plugs?

- Smart plugs are smart devices that can be plugged into any outlet, allowing you to control supported smart devices remotely.

- Smart lights can also be controlled remotely, either through your handheld devices, or through voice activated Smart Speakers like Alexa.

- Popular smart lights that can be used with the popular Alexa Smart Speaker include the Phillips Hue kits, LIFX Lightbulbs, and the Kasa Smart Lightbulbs.
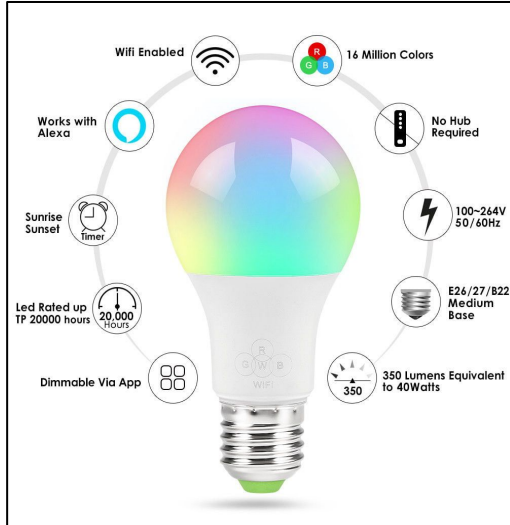
What are smart lights and plugs?

- Smart lights are like traditional LED bulbs but are paired with smart plugs. When paired with smart plugs, it provides a way to remotely access your lights in your home without using a traditional light switch.

- You can remotely dim your living room lights, turn off the bathroom lights or change the color of your bedroom lights.

- The most popular smart plug is the amazon smart plug. However, there are other brands that work just as similar to these devices.

- Smart light bulbs are first connected to outlets in your home. Through an internet connected hub, the Smart Light bulbs are able to be controlled through one location!

- Smart light bulbs come with an app that allows you to control them via a mobile device.

Any Questions?

We just finished learning about smart lights & outlets!

05

Smart Home Security Systems

How do smart doorbells/camera systems enhance my security and help make my home safe?

- Smart home security systems are a collection of devices for any home that enhance traditional security systems such as surveillance cameras, door locks, alarms, etc.

- Ring is an example of a company that offers smart home security systems.

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What are smart home security systems?

- The <u>first picture</u> is an example of a video doorbell that acts not only as a doorbell, but also allows you to see live footage of those who ring it. Some even allow you to speak directly to your visitor through your device!

- Security kits like the one in the <u>second picture</u> offer alarm systems that detect fires, gas leaks, or unwanted visitors using motion detection.

- Companies like Ring also offer surveillance cameras like the <u>last picture</u> that can be placed anywhere outside or inside your home to provide you with added security.

Any Questions?

We just finished learning about smart home security systems!

Q & A Session

06

You will be able to ask us any questions you have about the lesson!

THANKS!

We really hope that you loved the lesson as much as we enjoyed teaching you! If you have any further questions please contact Teens Teach Technology technology.by.teens@gmail.com!

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Twitter: https://twitter.com/_teensteachtech
Website: teensteachtechnology.org

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We will have an available recording of this lesson which your librarian will send to you by link! That will be really helpful if you were confused or want to go back and follow the steps. Please fill out the participant form we placed in the chat to give us feedback on how we did!