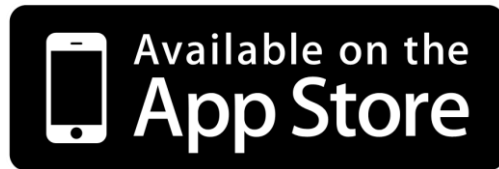
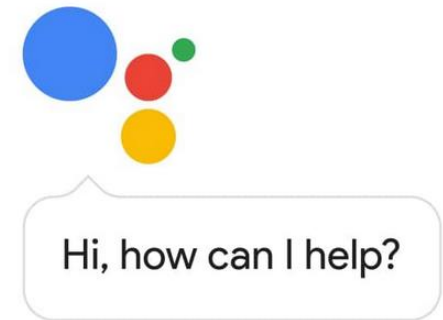


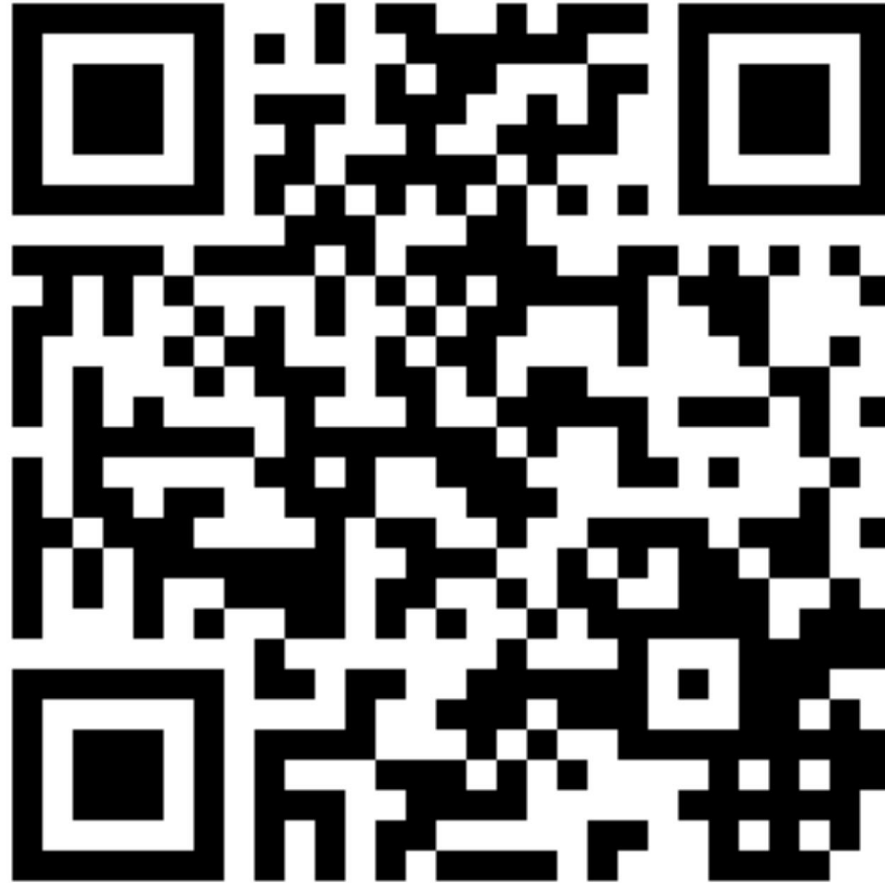
Alexa! Hey Siri! Ok Google! The Connected Classroom



Presented by Michael Gray



Download this Presentation



www.AutoUpkeep.com/presentations



Essential Questions

- How are Artificial Intelligence and Machine Learning changing the way we teach?
- How can “Smart Speakers” be used in the classroom? Do voice assistants have a place in the classroom? What are privacy issues?
- How can QR Codes be used in the classroom to direct learners to content?
- How can Apps and YouTube be used to teach Automotive Technology?



The Connected Classroom

This presentation will focus on four areas:

- Artificial Intelligence, Machine Learning, and Virtual Assistants
- QR Codes
- Apps
- Videos



Artificial Intelligence (AI) and Machine Learning (ML)

- “While AI is the broad science of mimicking human abilities, machine learning is a specific subset of AI that trains a machine how to learn.”



YouTube Video – Time 4:52 - <https://www.youtube.com/watch?v=ihd9zrW6DOk>

Source: https://www.sas.com/en_us/insights/articles/big-data/artificial-intelligence-machine-learning-deep-learning-and-beyond.html



Artificial Intelligence in Education

- "Educators are using AI tools to assess students' skills and weaknesses, create customized learning materials, and make time-consuming tasks ... more efficient and effective."
- "As AI gets more sophisticated, it might be possible for a machine to read the expression that passes on a student's face that indicates they are struggling to grasp a subject and will modify a lesson to respond to that."

Source: Dell Technologies <https://tinyurl.com/y75bsgyt>

Source: Forbes <https://www.forbes.com/sites/bernardmarr/2018/07/25/how-is-ai-used-in-education-real-world-examples-of-today-and-a-peek-into-the-future/#19bff227586e>



Useful Tool or Privacy Problem

- "Check with your school or district before bringing a voice assistant into the classroom."
 - "Educate yourself first about student privacy state and federal laws."
 - "Get parent permission before using a voice assistant in the classroom."
- "Treat the voice assistant as if it was an outside classroom visitor."
- "Manage device privacy settings carefully. Delete voice recordings regularly."
- "Consider how and whether this device will enhance teaching and learning."

Bearden, S. (November 18th, 2018). Voice Assistants in the Classroom: Useful Tool or Privacy Problem? Retrieved from <https://ferpasherpa.org/bearden4/>



Past Issues

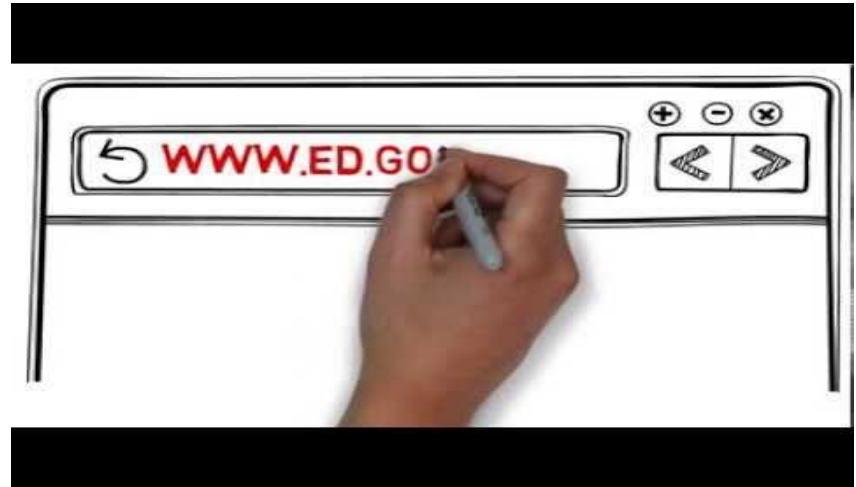
- "Apple Disables Group FaceTime After Security Flaw Let Callers Secretly Eavesdrop"
<https://www.npr.org/2019/01/29/689581417/apple-disables-group-facetime-after-security-flaw-let-callers-secretly-eavesdrop>
- "Hacked Nest Cam convinces family that US is being attacked by North Korea. Nest says its systems weren't breached."
<https://www.cnet.com/news/hacker-uses-nest-cam-to-convince-family-us-is-under-north-korean-missile-attack/>
- "Amazon has fixed a bug that allowed hackers to listen in on Alexa devices"
<https://www.digitaltrends.com/home/hackers-listening-with-alexa/>



FERPA

- Family Educational Rights and Privacy Act (FERPA) 1974
 - "The U.S. Department of Education has not issued any formal guidance on the use of voice assistants in the classroom, but their [FAQ's on Photos and Videos Under FERPA](#) provides guidance and examples of situations in which photos and videos would be considered FERPA-protected education records (the same principles would apply for audio recordings)."

Bearden, S. (November 18th, 2018). Voice Assistants in the Classroom: Useful Tool or Privacy Problem? Retrieved from <https://ferpasherpa.org/bearden4/>



YouTube Video – Time 4:03 - <https://www.youtube.com/watch?v=nhlDkS8hvMU>



YouTube Video – Time 3:32 - <https://www.youtube.com/watch?v=0M7juYs8Yh4>



COPPA

- Children's Online Privacy and Protection Act (COPPA)
 - Under the age of 13, must have parental consent.
 - "The Federal Trade Commission (FTC) has issued [Guidance on COPPA and Voice Recordings](#) that clarifies that if a child is using their voice as substitute for typing (for example, asking a question) in such a way that does not reveal any personal information – such as their name – it would not be considered a violation of COPPA."



Bearden, S. (November 18th, 2018). Voice Assistants in the Classroom: Useful Tool or Privacy Problem? Retrieved from <https://ferpasherpa.org/bearden4/>



Should You Use Smart Speakers in the Classroom?

- Short answer, I don't know. This presentation is about what is available and not whether you should use it.
- This technology is changing by the day.
- The decision should be made by you, your educational institution, and other stakeholders.



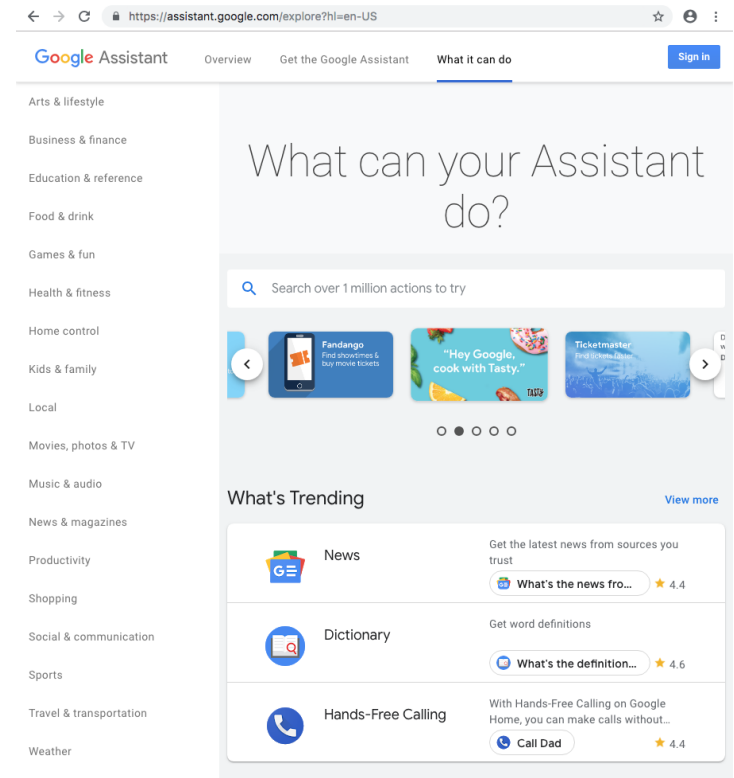
No Camera = Fewer Privacy Concerns

- If you decide to use a smart speaker, consider one without a camera.
- See article, "Google's Home Hub Is Missing a Camera. Here's Why That's a Smart Idea" <http://time.com/5420044/google-home-hub-camera-smart-idea/>
- You can solve a high tech problem with a low tech solution – use a piece of electrical tape to cover the camera.
- Turn the mic off when not being used.

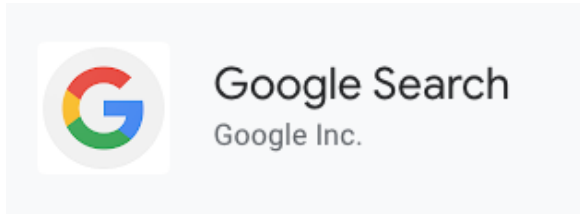


Meet Your Google Assistant

- Actions for Google Assistant – these are Google developed and third-party developer actions that integrate apps and services into Google devices. Go to: <https://assistant.google.com/explore>



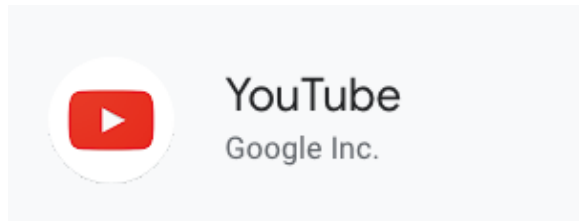
Example "Actions" for Google Assistant



- Ok Google, who was Henry Ford?
- Ok Google, show me picture of a Model T?
- Ok Google, convert 350 cubic inches into liters?



Example "Actions" for Google Assistant



- General Search
 - Ok Google, show me history of the assembly line videos on YouTube.
- Specific Search
 - Ok Google, play 100 years of the moving assembly line in 100 seconds on YouTube.



You can create an "Action" for Google Assistant using a Template

- Create an Action within minutes
- Build without knowing code
- Choose a pre-defined personality
- Expand to different languages



Flash cards

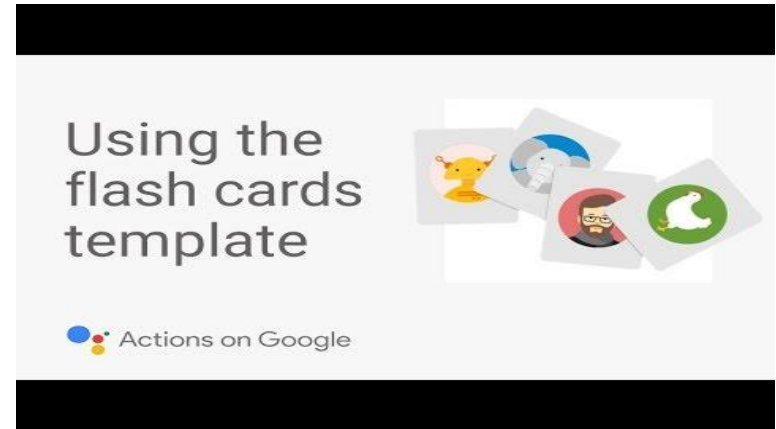


Trivia



Flashcards vs. Trivia

- Flashcards – Good for automotive questions with one answer
- Trivia – Good for multiple choice and ASE style questions – up to 4 answer choices are allowed



YouTube Video – Time 3:40 - https://www.youtube.com/watch?v=sjpbu4y6F_M



YouTube Video – Time 4:45 - <https://www.youtube.com/watch?v=4AOI1tZrgMI&t=2s> 17



Google Assistant for Chapter Reviews

- Ok Google, talk to Auto Upkeep Chapter 1 Review.



Meet Amazon Alexa

- » Alexa Skills - these are Amazon developed and third-party developer skills that integrate apps and services into Amazon devices. At www.Amazon.com go to Alexa Skills in the search bar.



Example "Skills" for Amazon Alexa



Wikipedia
by Amazon

- Alexa, Wikipedia the Tucker Torpedo.
- Alexa, Wikipedia the Rivian automotive company.
- Alexa, Wikipedia the internal combustion engine.
- Alexa, Wikipedia vehicular automation.



Example "Skills" for Amazon Alexa



Translated
by Translated Labs

- Alexa, open Translated.
- Translate "This is a hybrid electric vehicle" to Spanish.
- Translate "Use the torque wrench" to Chinese.



Example "Skills" for Amazon Alexa



wikiHow
by wikiHow

- Alexa, open wikiHow.
- "How to Change a Tire"
- "How to Determine Gear Ratio"
- "How to Check Fuses"
- "How to Use a Torque Wrench"



Example "Skills" for Amazon Alexa that Includes Dynamic Content



My Advice Mechanic

by Vision Del Mar, LLC

- Alexa, open My Advice Mechanic.
- Alexa will ask you a few simple Yes or No questions. At the end, Alexa will tell you the most likely cause of your car problem.

Note: This skill contains dynamic content, which is content that is updated real-time based on inputs.



Exponential Growth is Occurring Now

- Over 10,000 Amazon employees are working on its Alexa virtual assistant. (Nov 2018 Data)

MacMillan, D. (November 13th, 2018). Amazon Says It Has Over 10,000 Employees Working on Alexa, Echo. Retrieved from https://www.morningstar.com/news/dow-jones/TDJNDN_2018111310791/amazon-says-it-has-over-10000-employees-working-on-alexa-echo.html

- Alexa has over 50,000 skills. (Jan 2019 Data, Amazon.com)



Google Assistant

- Google's virtual personal assistant, is available on more than 500 million devices. (Jan 2019 Data, Google.com)
- Phones – Speakers – Smart Displays – Cars – TVs – Laptops – Tablets – Wearables
- (Yes, even for iPhones.)



Ask Your Assistant a Question or Give It a Command

- Break into groups. Use the Smart Speakers or the Google Assistant on your phone.
- If everyone says "OK Google" or "Alexa" at the same time the devices will get confused.
- Note what questions or commands would be beneficial to use in an automotive classroom.



Podcasts

- Podcasts can be a great teaching tool.
- Need an up-to-date sub plan? Download your favorite Podcast. Use a generic worksheet to "help" students follow along, learn, and reflect.
- One of my favorites, EV News Daily.



YouTube (Audio) – Time 19:35 -
<https://www.youtube.com/channel/UCbDKi6oprHEakWYkQH0Ad2w/featured>
<https://www.evnewsdaily.com/>



Have students...

- Note source.
- Summarize what was discussed, read, or viewed.
- Give opinions, conclusions, and reactions.

BIBLIOGRAPHY

SUMMARY

OPINIONS/CONCLUSIONS/REACTIONS

Require 3-5 complete sentences in summary and opinion block.



QR Codes

- QR is abbreviated from “Quick Response”.
- Some phones (iPhones) do not need a special app, just open your camera and scan the code.
- Others phones require a QR Reader. You can download a Free App in your App Store. Just search “QR Reader”.
- How do you choose? Look for Apps that have lots of downloads and lots of positive reviews.



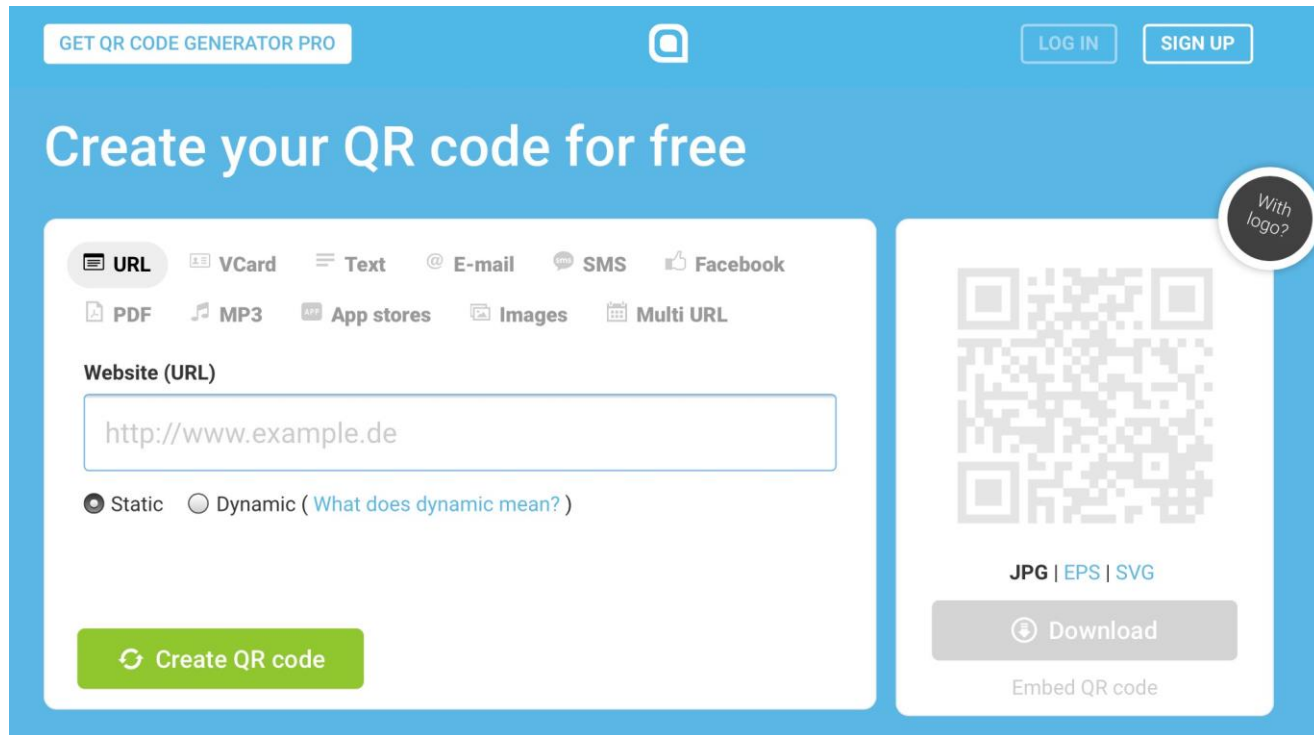
QR Codes Give Students a Direct Link

- The benefit of using a QR is that it gives students a direct link.
- Ideal for specific Documents, PowerPoints, PDFs, Webpages, and YouTube videos you want students to have direct access to.
- You can put files on a sharable cloud drive and create the QR code from the direct link. If the content is already posted with a direct link, use that.
- Keeps students on task without them wasting time searching through unreliable resources on the web.



Making QR Codes

- Make your QR codes for free at <http://www.qr-code-generator.com/>

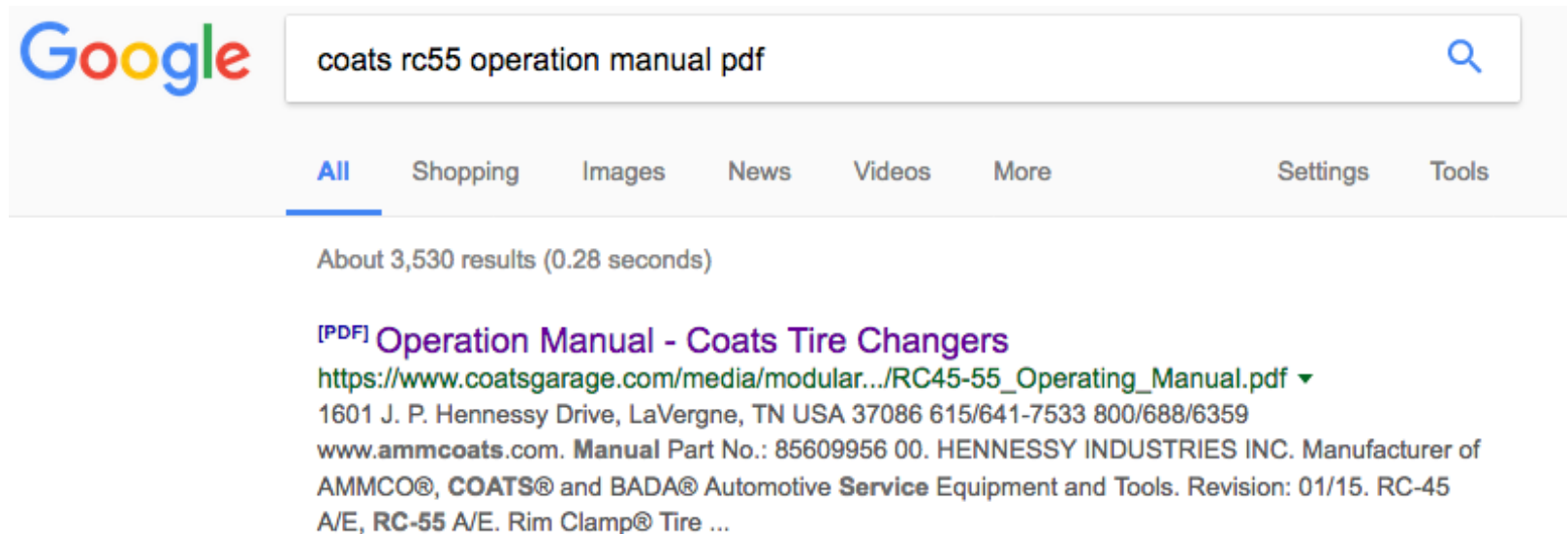


The screenshot shows the 'GET QR CODE GENERATOR PRO' website. The header is blue with a logo, 'LOG IN', and 'SIGN UP' buttons. The main heading is 'Create your QR code for free'. Below this, there are tabs for different QR code types: URL (selected), VCard, Text, E-mail, SMS, Facebook, PDF, MP3, App stores, Images, and Multi URL. The 'URL' tab is active, showing a text input field with 'http://www.example.de' and a 'Website (URL)' label. Below the input field are radio buttons for 'Static' (selected) and 'Dynamic' (with a link 'What does dynamic mean?'). A green 'Create QR code' button is at the bottom left. On the right, a large QR code is displayed, with a circular badge saying 'With logo?'. Below the QR code are links for 'JPG | EPS | SVG' and a 'Download' button. At the bottom right, there is a link for 'Embed QR code'.



Step-by-Step Example

- Step 1 – Search for the desired content on Google – be specific on what you want to link to



Step-by-Step Example (Continued)

- Step 2 – Click on the link



[PDF] [Operation Manual - Coats Tire Changers](#)

https://www.coatsgarage.com/media/modular.../RC45-55_Operating_Manual.pdf ▼

1601 J. P. Hennessy Drive, LaVergne, TN USA 37086 615/641-7533 800/688/6359

www.ammcoats.com. Manual Part No.: 85609956 00. HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools. Revision: 01/15. RC-45 A/E, RC-55 A/E. Rim Clamp® Tire ...

- Step 3 – Highlight and copy the link URL (webpage address)

  https://www.coatsgarage.com/media/modular_content/RC45-55_Operating_Manual.pdf



Step-by-Step Example (Continued)

- Step 4 – Paste the URL in the QR Code Generator, then click “Create QR code”

Create your QR Code for free


URL VCard Text @ E-mail SMS Facebook PDF MP3

App stores Images Multi URL

Website (URL)

☒ Static ☐ Dynamic [What does dynamic mean?](#)

Create QR code



JPG EPS SVG

Download

Embed QR code



Step-by-Step Example (Continued)

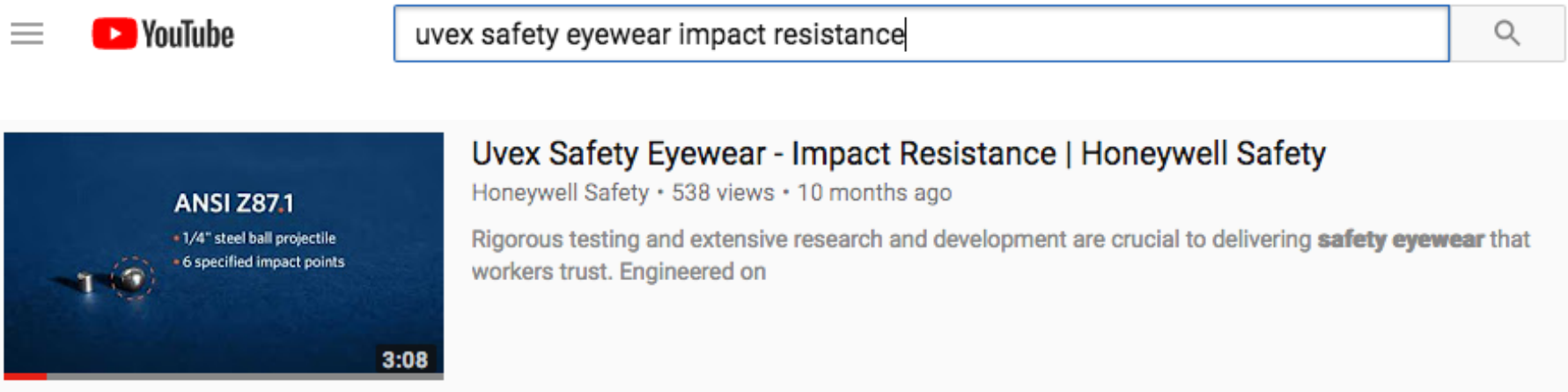
- Step 5 – Download the QR Code jpg
- Step 6 – Paste the QR Code on or near the specific piece of equipment



Another Example

The same process can be done for linking directly to training videos.

- Step 1 – Search for the desired video – be specific on what you want to link to



Step-by-Step Example (Continued)

- Step 2 – Click on the video link



Uvex Safety Eyewear - Impact Resistance | Honeywell Safety

Honeywell Safety • 538 views • 10 months ago

Rigorous testing and extensive research and development are crucial to delivering **safety eyewear** that workers trust. Engineered on

- Step 3 – Highlight and copy the video URL



Step-by-Step Example (Continued)

- Step 4 – Paste the URL in the QR Code Generator, then click “Create QR code”

Create your QR Code for free

URL

VCard

Text

@ E-mail

SMS

Facebook

PDF

MP3

App stores

Images

Multi URL

Website (URL)


https://www.youtube.com/watch?v=4cuYluyVNPM

☒ Static

☐ Dynamic

What does dynamic mean?

Create QR code



With Logo?

JPG EPS SVG

Download

Embed QR code

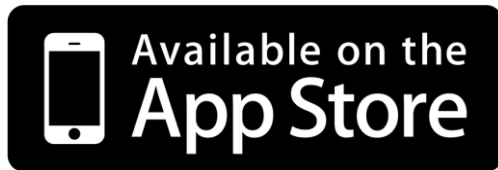


Step-by-Step Example (Continued)

- Step 5 – Download the QR Code jpg
- Step 6 – Paste the QR Code on or near the specific piece of equipment



Apps



- By 2021, it is estimated that there will be over 350 Billion App downloads.
- Apple App Store has over 2 million apps.
- Google Play has over 3 million apps.



OBD II App



BlueDriver

For iOS and Android

Developed by professional engineers in North America. Free App (Apple and Android), BlueDriver Sensor is \$99.95



YouTube Video – Time 1:50 - <https://www.youtube.com/watch?v=-aHBBIJwnMI&t=3s>



OBD II App

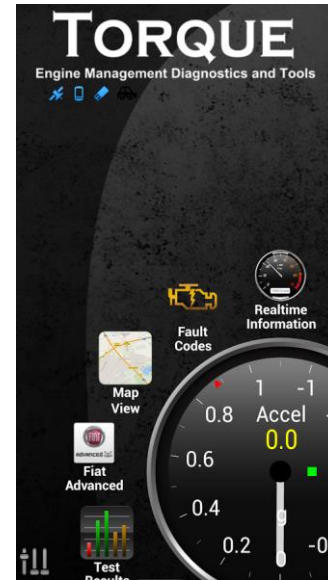
Torque Pro and Torque Lite

For Android

“See what your car is doing in realtime, get OBD fault codes, car performance, sensor data and more! Torque is a vehicle / car performance / diagnostics tool and scanner that uses an OBD II Bluetooth adapter to connect to your OBD2 engine management / ECU.”

Cost \$4.95 + OBD II Bluetooth Adapter

The Lite Version is Free



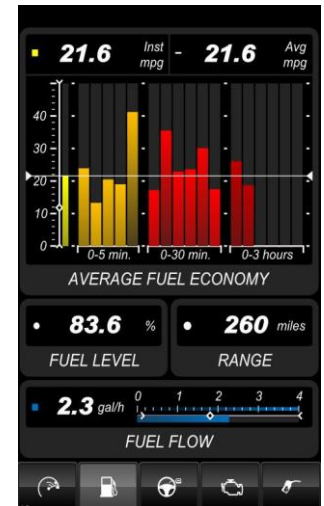
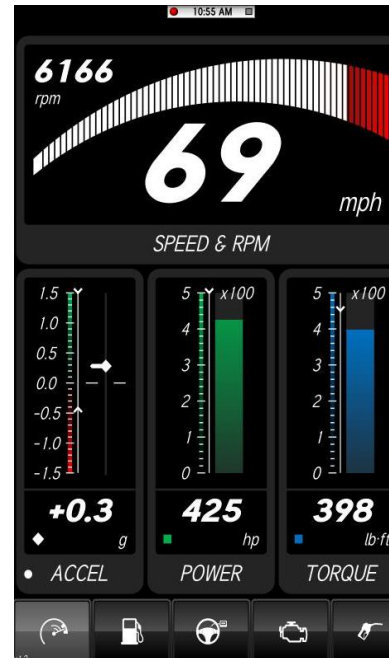
OBD II App

DashCommand

For iOS and Android

“DashCommand is an app for your car. It turns your phone or tablet into an advanced display for your engine.”

\$9.99 + OBD II Connector



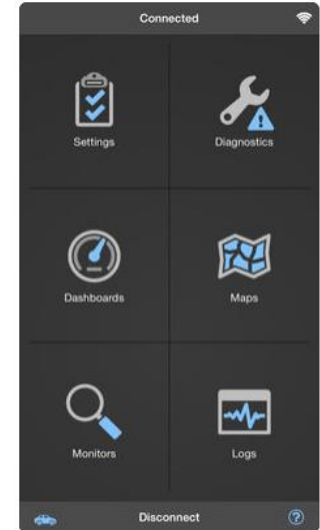
OBD II App

OBD Fusion

For iOS and Android

“OBD Fusion is an app for your car that allows you to read OBD2 vehicle data directly from your iPhone, iPod Touch, iPad, or Android phone or tablet.”

\$3.99 to \$9.99 + OBD II Connector



OBD II Sensors/Dongles/Connectors

BAFX Products OBD II

\$21.99 to \$26.25 on Amazon (Note: If purchasing 5 or more units, contact BAFX directly at info@bafxpro.com for discount information.)

www.bafxpro.com

Supports ALL OBD2 protocols!

SAE J1850 PWM

SAE J1850 VPW

ISO9141-2

ISO14230-4 KWP

ISO15765-4 CAN

SAE J1939 CAN



BAFX Products Bluetooth Diagnostic OBDII Reader/Scanner for Android Devices

by BAFX Products

★★★★★ 11,266 customer reviews | 321 answered questions

List Price: \$29.99

Price: **\$21.99** & **FREE Shipping**. [Details](#)

You Save: **\$8.00 (27%)**

Get \$10 off instantly: Pay \$11.99 upon approval for the Amazon Prime Store Card.

✓ **prime** | Try Fast, Free Shipping ▾

Size: **For Android & Windows**

For Android & Windows
\$21.99

For iOS Devices
\$26.25



Part Lookup and Training App

Dayco App

For iOS and Android

Part Finder and Learning Center

www.daycoproducts.com/dayco-app



PART FINDER



**PARTS BY LICENSE
PLATE**



WHERE TO BUY



LEARNING CENTER



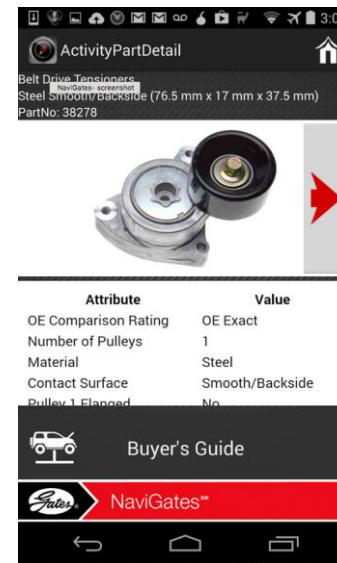
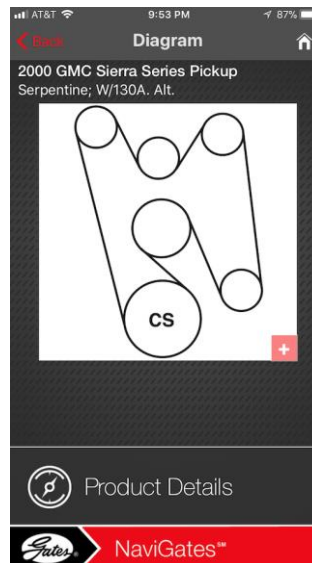
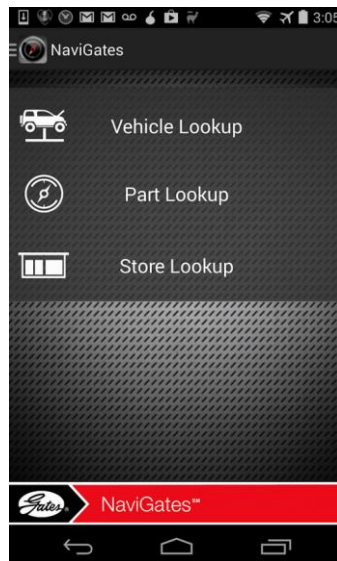
Part Lookup and Training App

NaviGates App

For iOS and Android

Part Finder, Belt Routing, and Part Pictures

www.gates.com/resources/mobile-apps/navigates

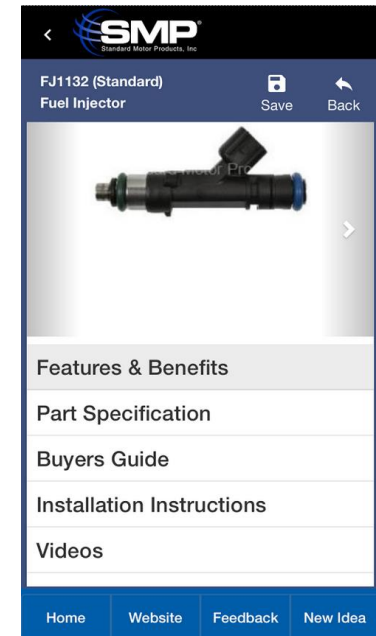
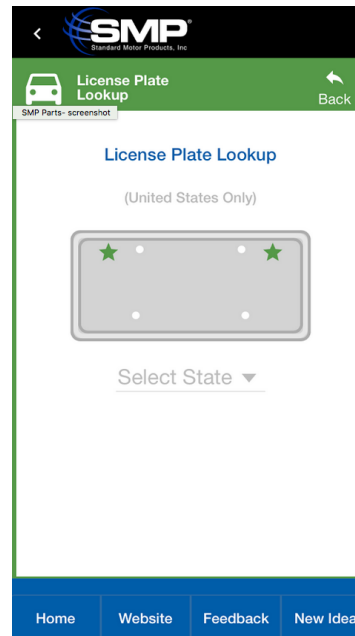


Part Lookup and Training App

SMP Parts App

For iOS and Android

Part Finder, Part Pictures, and “Just the Facts”



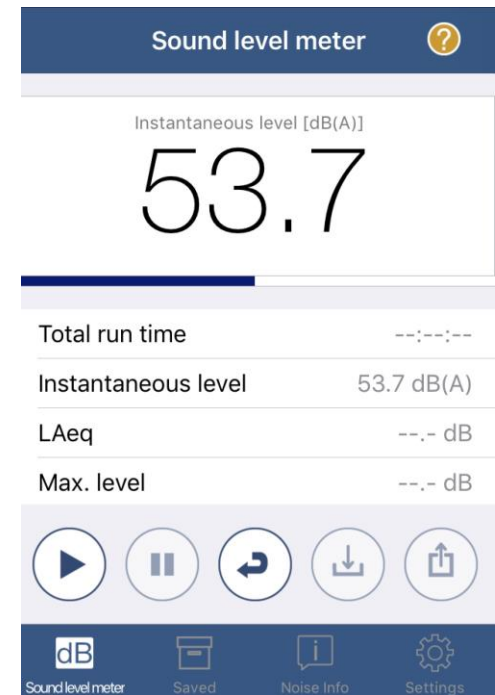
Safety App

NIOSH SLM

For iOS

“The NIOSH Sound Level Meter mobile application is a tool to measure sound levels in the workplace and provide noise exposure parameters to help reduce occupational noise-induced hearing loss.”

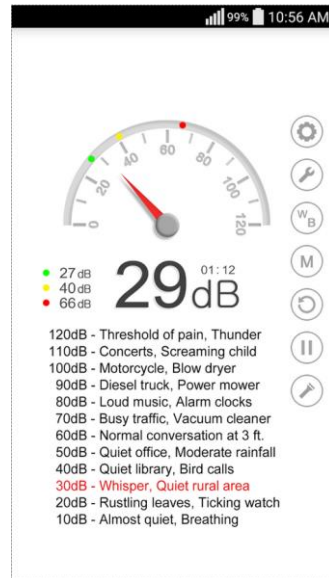
Note: Decibel (dB) scale is logarithmic (based on multiplication). This means that an impact wrench at 110 dB has 100,000 times the sound pressure than a normal conversation at 60 dB. The problem is that a 10 dB increase may only sound twice as loud in your ears, but it actually represents 10 times the sound pressure.



Safety Apps

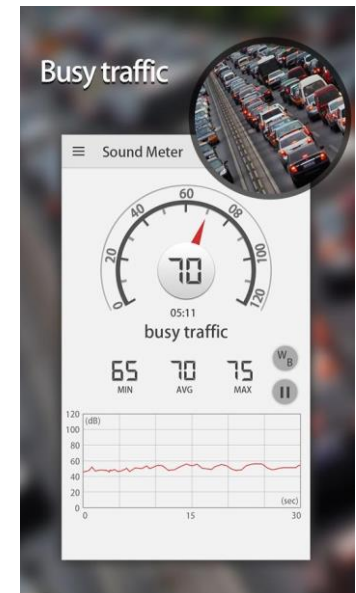
Sound Meter

For Android



Sound Meter & Noise Detector

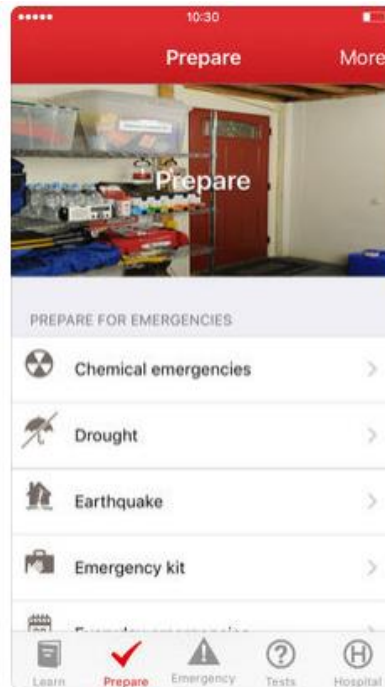
For Android



Safety App

First Aid – American Red Cross

For iOS and Android



Specialty App

TREMEC Toolbox

For iOS and Android

“The TREMEC Toolbox will help you simplify driveline setup, predict the effects of changing gear ratios and tire size, and calculate vehicle speed and RPM variables.”



YouTube Video – Time 1:08 - <https://www.youtube.com/watch?v=JIE6BmbHk2Q>

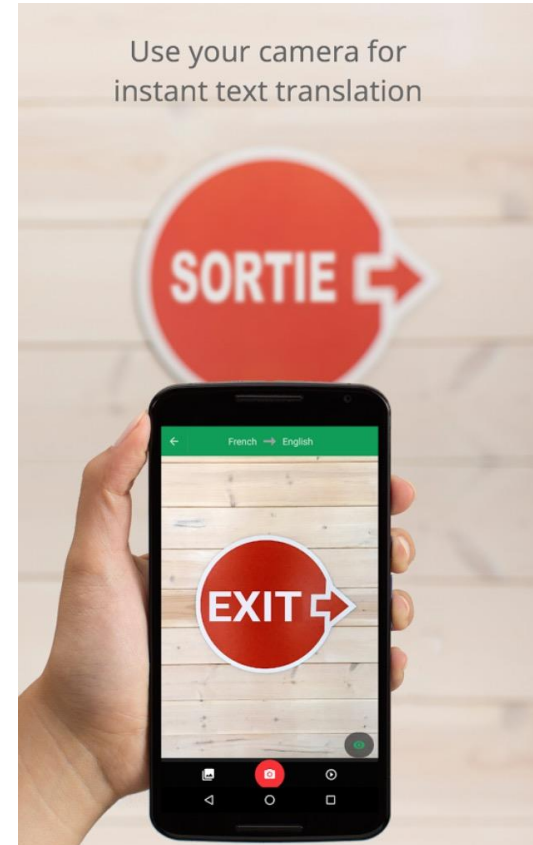


Translation App

Google Translate

For iOS and Android

“Instant camera translation:
Use your camera to translate
text instantly in 38
languages.”



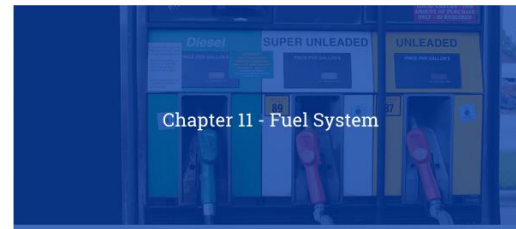
Organizing Apps into Systems and Content Areas

AutoUpkeep.com

Go to www.AutoUpkeep.com/apps/

Apps

Click on the links below to view apps that support the content learned in Auto Upkeep.



What apps do you recommend?

- Discussion...



YouTube

- Safety Training
- How-To
- Product Information
- Entertainment

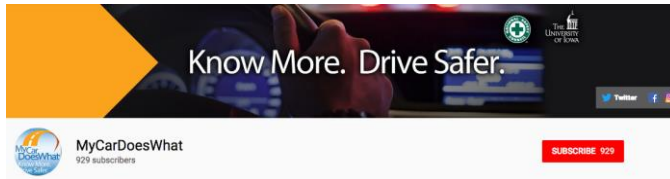


YouTube Video – Time 1:44 -

https://www.youtube.com/watch?v=Ec3EKM5YVT0&list=PLnDMnCUQ_YoAqGwD8YjFxu9onT64iF-3o&index=12



YouTube Channels Institutions/Organizations



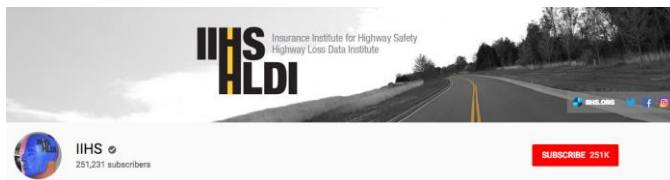
My Car Does What - from the
University of Iowa

https://www.youtube.com/channel/UCC_rywrY-v79f_Q34A_bcg



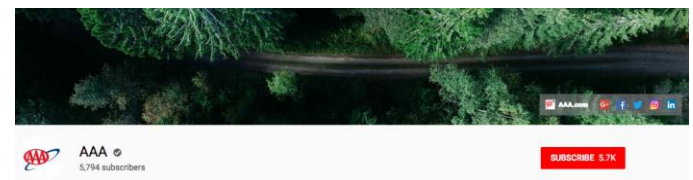
National Highway Traffic Safety Admin.

<https://www.youtube.com/user/USDOTNHTSA>



Insurance Institute for Highway Safety

<https://www.youtube.com/user/iihs>



AAA

<https://www.youtube.com/user/AAA>



YouTube Channels Institutions/Organizations

Example from Insurance Institute for Highway Safety on Blind Spot Detection



YouTube Video – Time 0:44 - <https://www.youtube.com/watch?v=B93tfG4ZydY&list=PL8F97D79EF8A27839&index=3>



YouTube Channels Part Manufacturers



Gates Automotive Training

<https://www.youtube.com/user/GatesAutoTraining>



Dayco Products

<https://www.youtube.com/user/DaycoProductsLLC>



Bosch Auto Parts

<https://www.youtube.com/user/BoschAutoParts>

Bosch Mobility Solutions

<https://www.youtube.com/user/BoschAutomotive>



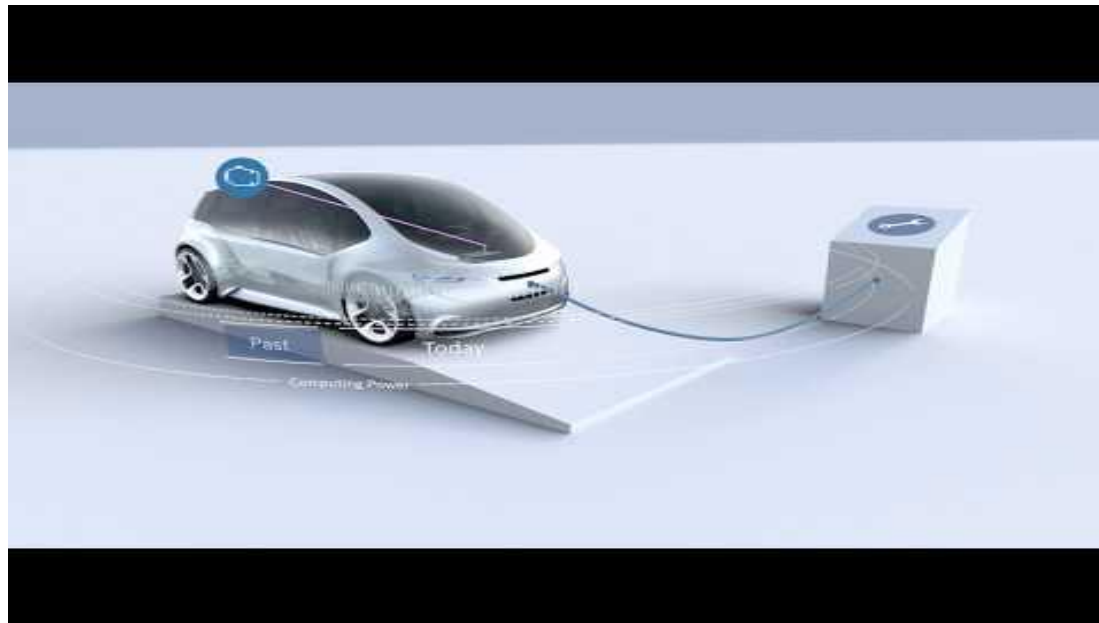
ACDelco

<https://www.youtube.com/user/ACDelcoOfficialPage>



YouTube Channels Part Manufacturers

Example from Bosch Mobility Solutions on Central Gateway



YouTube Video – Time 2:28 - <https://www.youtube.com/watch?v=ncbo94qZsvM>



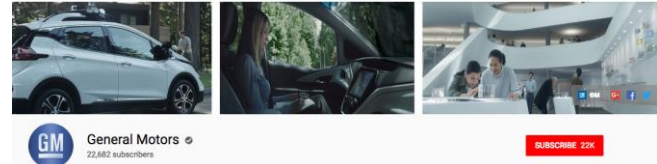
YouTube Channels

Automotive Manufacturers



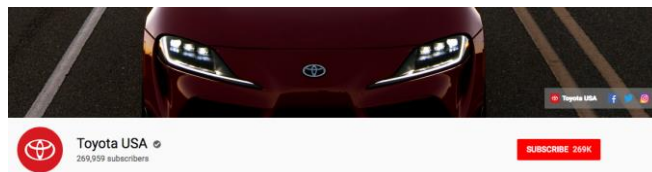
Ford Motor Company

<https://www.youtube.com/user/Ford>



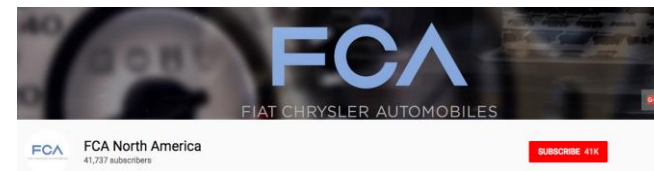
General Motors

<https://www.youtube.com/user/gmblogs>



Toyota

<https://www.youtube.com/user/ToyotaUSA>



Fiat Chrysler Automobiles

<https://www.youtube.com/user/PentastarVideo>



YouTube Channels

Automotive Manufacturers

Example from Toyota USA on Fuel Cell Technology



YouTube Video – Time 3:23 - <https://www.youtube.com/watch?v=9hZBv-o4bl0&t=51s>



YouTube Channels

Auto Parts Stores



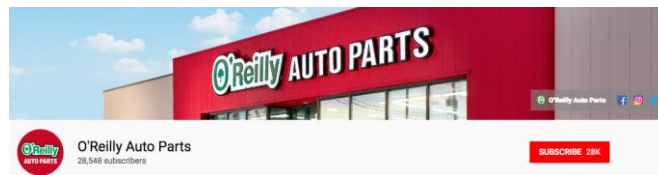
Advance Auto Parts

<https://www.youtube.com/user/AdvanceAutoParts>



AutoZone

<https://www.youtube.com/user/AutoZone>



O'Reilly Auto Parts

<https://www.youtube.com/user/OReillyAutoParts>



1A Auto Parts

<https://www.youtube.com/user/1aauto>



YouTube Channels

Auto Parts Stores

Example from 1A Auto on
How to Install Replace MAF Mass Air Flow Sensor 2001-07 Toyota Highlander L4 2.4L



YouTube Video – Time 2:41 - <https://www.youtube.com/watch?v=PK8zol6QAj8&t=1s>

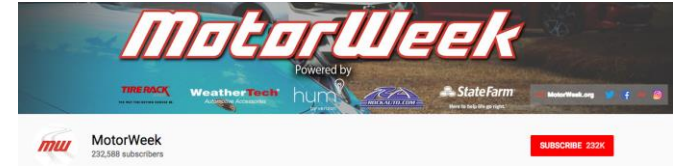


YouTube Channels Auto Magazines



Car and Driver Magazine

<https://www.youtube.com/user/CARandDRIVER>



MotorWeek

<https://www.youtube.com/user/Motorweek>



Motor Trend

<https://www.youtube.com/user/MotorTrend>



Motor Age

<https://www.youtube.com/user/MotorAgeMagazine>



YouTube Channels

Auto Magazines

Example from Motor Age on Mastering Your Digital Multimeter (DMM or DVOM)



YouTube Video – Time 17:33 - <https://www.youtube.com/watch?v=j5GaBCPQ4Bc>



YouTube Channels

YouTube Stars



Engineered Explained

<https://www.youtube.com/user/EngineeringExplained>



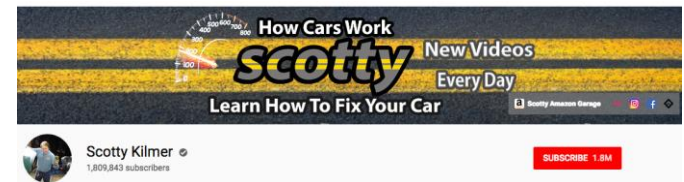
EricTheCarGuy

<https://www.youtube.com/user/EricTheCarGuy>



ChrisFix

<https://www.youtube.com/user/Paintball007>



Scotty Kilmer

<https://www.youtube.com/user/scottykilmer>



YouTube Channels

YouTube Stars

Example from Engineering Explained on AWD vs 4WD



YouTube Video – Time 5:51 - <https://www.youtube.com/watch?v=Jk246sutET0>



YouTube Channels

Auto Teachers



WeberAuto

<https://www.youtube.com/user/WeberAuto>



ScannerDanner

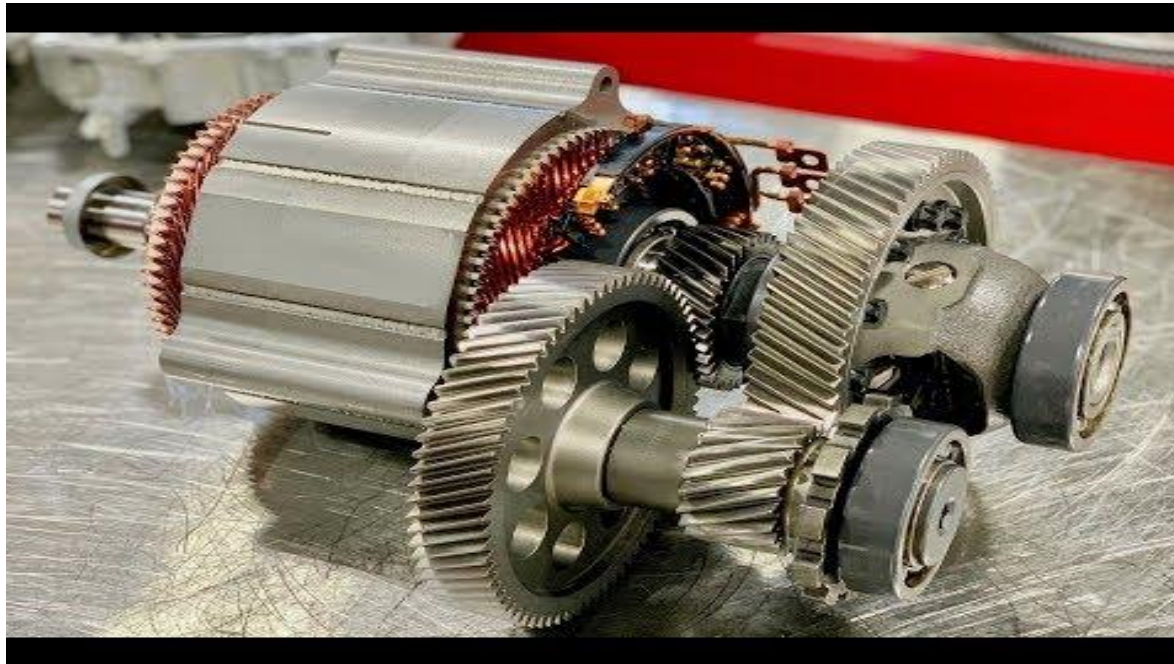
<https://www.youtube.com/user/ScannerDanner>



YouTube Channels

Auto Teachers

Example from WeberAuto on Chevrolet Bolt EV Traction Motor

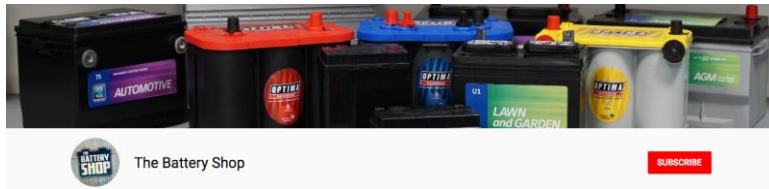


YouTube Video – Time 58:42 - <https://www.youtube.com/watch?v=APhRPSdmdmk&t=2s>



YouTube Channels

Jim Bates Productions



The Battery Shop (Johnson Controls)

<https://www.youtube.com/channel/UCNGQ9Fb1AEi1kpcm9weip3A/featured>



Wrenchin' Up with Jim Bates

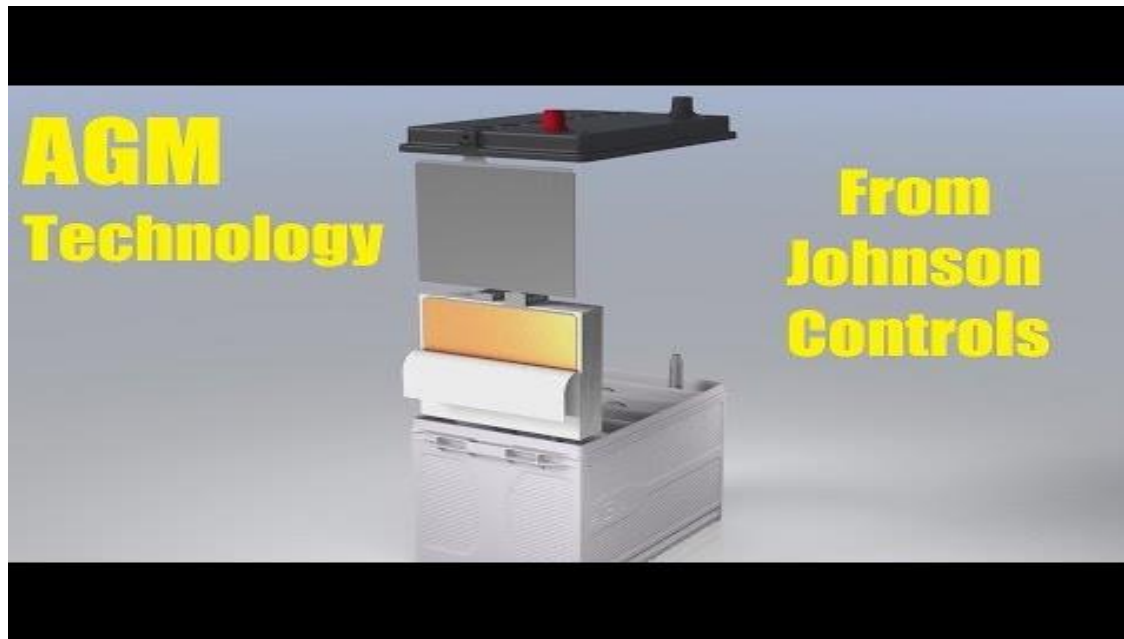
<https://www.youtube.com/channel/UCDDxuxELGQGIJuelZuw1sYA/featured>



YouTube Channels

Jim Bates Productions

Example from The Battery Shop on AGM Batteries from Johnson Controls



YouTube Video – Time 3:01 - <https://www.youtube.com/watch?v=7p4pidMVKok&t=6s>



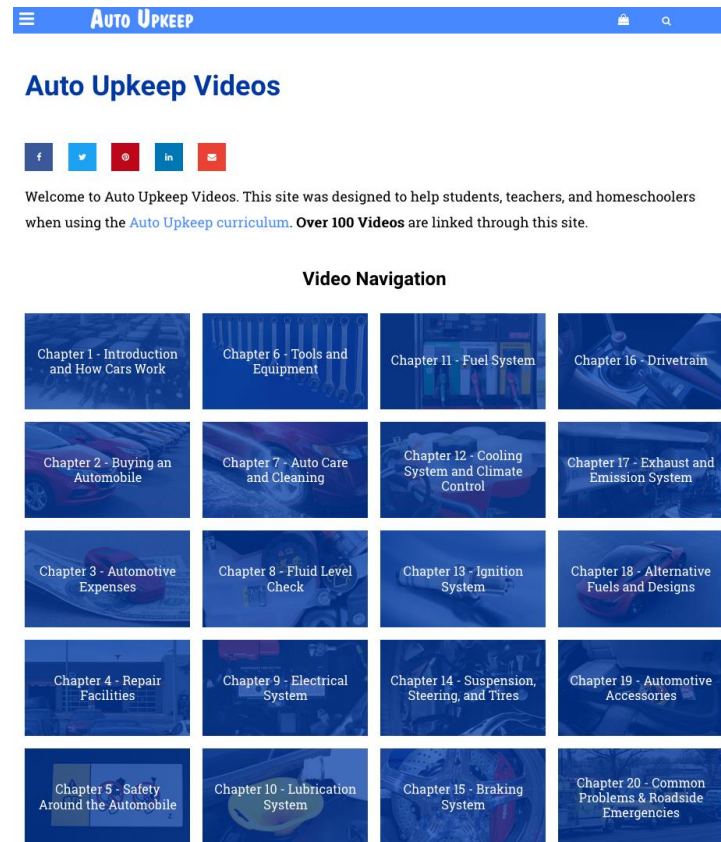
YouTube Channels

You can also use
YouTube videos to
show what not to do!



Organizing Videos into Systems and Content Areas

www.Video.AutoUpkeep.com



The screenshot shows the homepage of the Auto Upkeep Videos website. At the top is a blue navigation bar with the 'AUTO UPKEEP' logo, a home icon, and a search icon. Below the bar is the title 'Auto Upkeep Videos' and a row of social media icons for Facebook, Twitter, YouTube, LinkedIn, and Instagram. A welcome message states: 'Welcome to Auto Upkeep Videos. This site was designed to help students, teachers, and homeschoolers when using the [Auto Upkeep curriculum](#). Over 100 Videos are linked through this site.' The main section is titled 'Video Navigation' and contains a 5x4 grid of 20 video thumbnails, each with a chapter title. The chapters are: Chapter 1 - Introduction and How Cars Work, Chapter 2 - Buying an Automobile, Chapter 3 - Automotive Expenses, Chapter 4 - Repair Facilities, Chapter 5 - Safety Around the Automobile, Chapter 6 - Tools and Equipment, Chapter 7 - Auto Care and Cleaning, Chapter 8 - Fluid Level Check, Chapter 9 - Electrical System, Chapter 10 - Lubrication System, Chapter 11 - Fuel System, Chapter 12 - Cooling System and Climate Control, Chapter 13 - Ignition System, Chapter 14 - Suspension, Steering, and Tires, Chapter 15 - Braking System, Chapter 16 - Drivetrain, Chapter 17 - Exhaust and Emission System, Chapter 18 - Alternative Fuels and Designs, Chapter 19 - Automotive Accessories, and Chapter 20 - Common Problems & Roadside Emergencies.

Auto Upkeep Videos

Welcome to Auto Upkeep Videos. This site was designed to help students, teachers, and homeschoolers when using the [Auto Upkeep curriculum](#). Over 100 Videos are linked through this site.

Video Navigation

Chapter 1 - Introduction and How Cars Work	Chapter 6 - Tools and Equipment	Chapter 11 - Fuel System	Chapter 16 - Drivetrain
Chapter 2 - Buying an Automobile	Chapter 7 - Auto Care and Cleaning	Chapter 12 - Cooling System and Climate Control	Chapter 17 - Exhaust and Emission System
Chapter 3 - Automotive Expenses	Chapter 8 - Fluid Level Check	Chapter 13 - Ignition System	Chapter 18 - Alternative Fuels and Designs
Chapter 4 - Repair Facilities	Chapter 9 - Electrical System	Chapter 14 - Suspension, Steering, and Tires	Chapter 19 - Automotive Accessories
Chapter 5 - Safety Around the Automobile	Chapter 10 - Lubrication System	Chapter 15 - Braking System	Chapter 20 - Common Problems & Roadside Emergencies



Time to Share...

- What are some YouTube Channels that you use in the classroom or shop?
- Discussion...



Activities to Integrate Apps, YouTube Videos, and Smart Speakers

- Use QR Codes to help with training.
- Use an OBD II App to monitor engine data.
- Use Google Translate to help ESL students.
- Use Sound Meter Apps to monitor shop noise.
- Use YouTube videos for How-To information and then complete a video review.
- Use YouTube videos for safety training.
- Use Smart Speakers to access information in the classroom.
- Create a Google "Action" to help with Chapter and Unit reviews.



To Get Free eBook Access

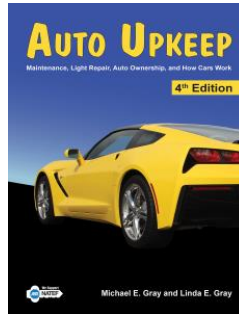
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