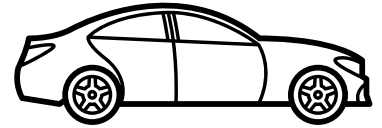


Mock Maintenance Challenge

Stations 1-4



#1 Car Part Match-Up



Materials

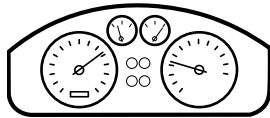
- Print diagrams of car systems (brakes, engine, tires) from ChiltonLibrary.
- Print out tool images
- Print repair steps on cards

Instructions

Match the part to the correct tool and correct repair step. Hide answers in envelopes labeled "Garage Bay 1,2,3" for a scavenger hunt vibe.



#3 Dashboard Decoder



Materials

- Chilton printouts of dashboard warning lights.

Instructions

Match the symbol with its meaning and recommended action from Chilton.

Each correct match reveals a letter / number clue leading to the final 'code' like unlocking a prize box.



#2 Flat Tire Fix

Materials

- Print out Chilton's step-by-step for changing a tire.
- Cut into strips.



Instructions

Teams must put the steps in correct order before the clock runs out. Add in one or two silly 'wrong' steps (sing to your tire) to make it fun.



#4 Mystery Repair

Materials

- Create a fake 'repair ticket' Use Chilton troubleshooting printouts with possible causes.

Instructions

Identify the most likely repair by cross-referencing symptoms with Chilton.

Solving unlocks the next case file.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Loosen the lug
nuts before
lifting the car.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Disconnect the negative cable before removing the battery.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Remove old spark plug and check the gap on the new one.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



#1 Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Unscrew the old filter and install a new one with fresh oil.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Remove the air filter housing clips and replace the filter.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

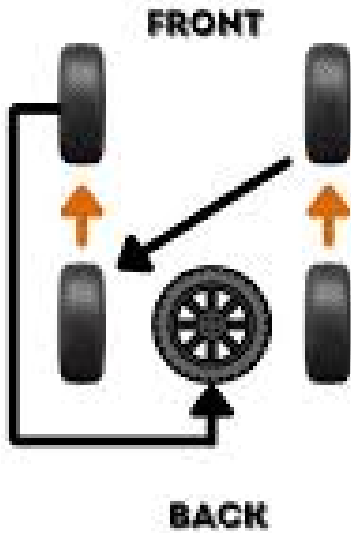
Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Lift the car to
remove and swap
front and rear tires.

TEENS

ADULTS

MULTIGEN

CHILTONLIBRARY

Car Part Match-Up Cards

Station 1



Instructions: Match the part → correct tool → correct repair step.

PART



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Parts
- Tools
- Repair Steps

TOOL



REPAIR STEP

Press the release tab
and slide the wiper
blade off the arm.

TEENS

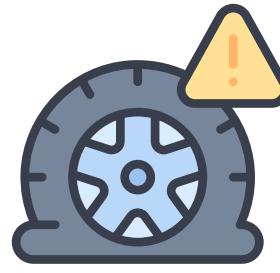
ADULTS

MULTIGEN

CHILTONLIBRARY

Flat Tire Fix Challenge

Station 2



#2 Instructions: Put the repair steps in the correct order!

SAFELY PARK AND ENGAGE THE PARKING BRAKE.

#1

PLACE JACK UNDER THE CAR'S FRAME NEAR THE TIRE.

#2

LOOSEN LUG NUTS WITH A WRENCH.

#3

RAISE THE CAR WITH THE JACK.

#4

REMOVE THE FLAT TIRE.

#5

MOUNT THE SPARE TIRE.

#6

TIGHTEN LUG NUTS SECURELY.

#7

TAKE A SELFIE WITH THE CAR.

CUT ON THE DOTTED LINES, MIX UP, AND HAVE PATRONS TO PUT STEPS IN ORDER.

PAT THE CAR FOR GOOD LUCK.

TEENS

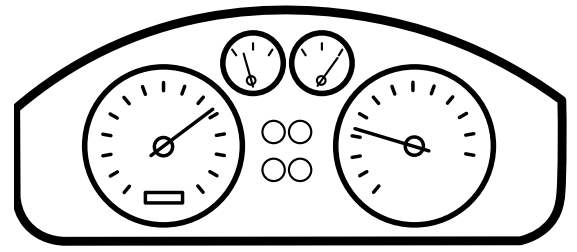
ADULTS

MULTIGEN

CHILTONLIBRARY

Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Low Oil Pressure

ACTION

Check engine oil
level and add oil
immediately.

TEENS

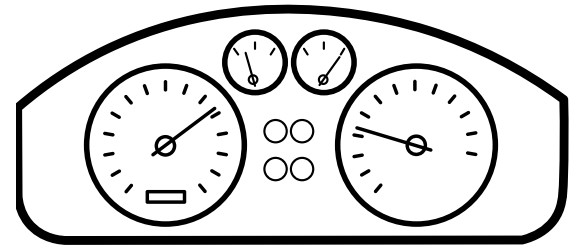
ADULTS

MULTIGEN

CHILTONLIBRARY

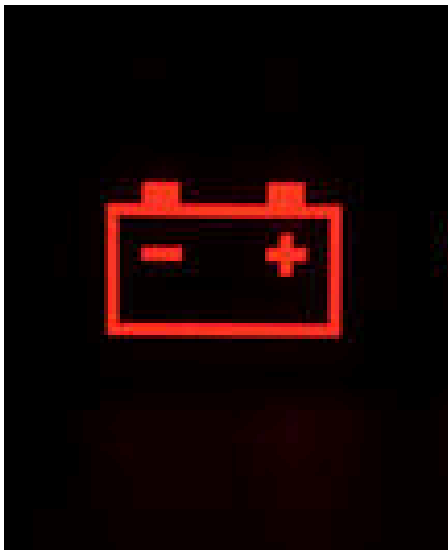
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Charging System Problem.

ACTION

Check alternator and battery connections.

TEENS

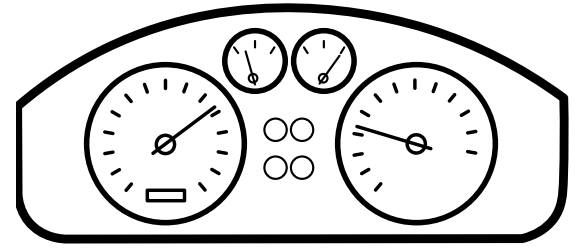
ADULTS

MULTIGEN

CHILTONLIBRARY

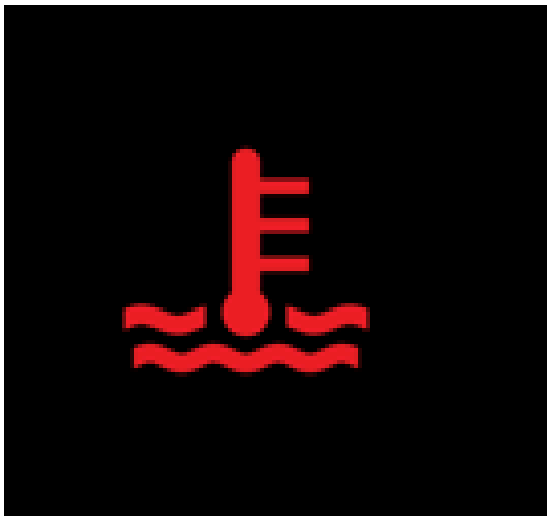
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Engine overheating.

ACTION

Stop driving, let the engine cool, and check coolant.

TEENS

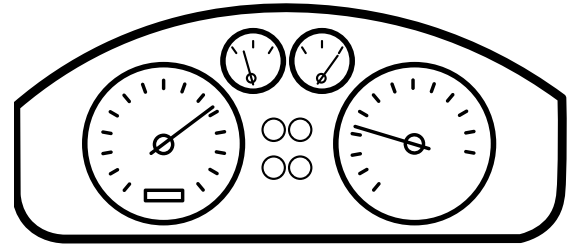
ADULTS

MULTIGEN

CHILTONLIBRARY

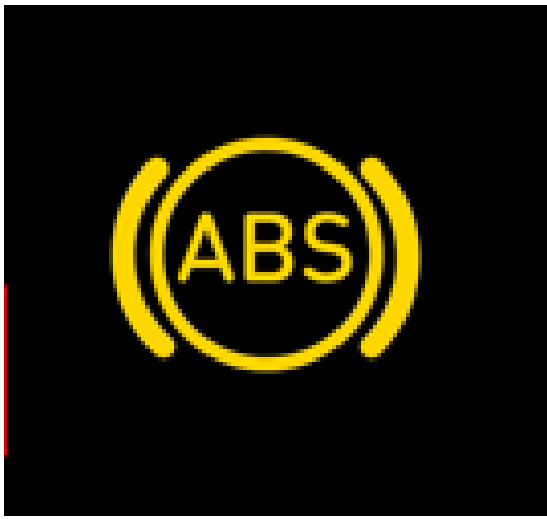
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Anti-lock braking system issue.

ACTION

Have brakes inspected--normal braking may still work, but ABS is disabled.

TEENS

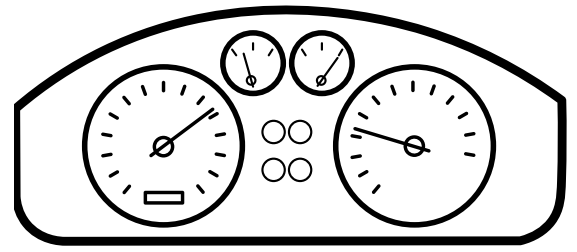
ADULTS

MULTIGEN

CHILTONLIBRARY

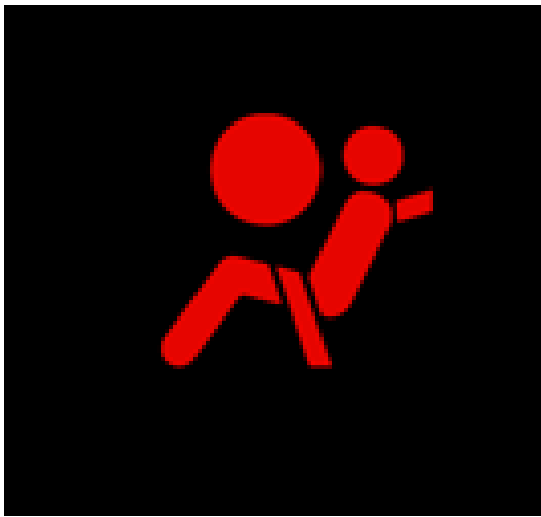
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Airbag system malfunction.

ACTION

Have vehicle serviced - airbags may not deploy in a crash.

TEENS

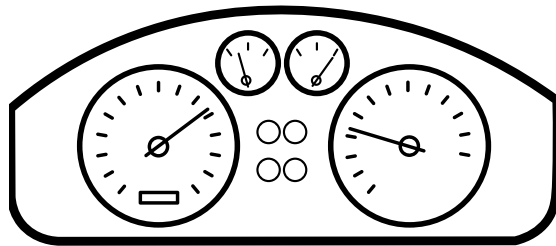
ADULTS

MULTIGEN

CHILTONLIBRARY

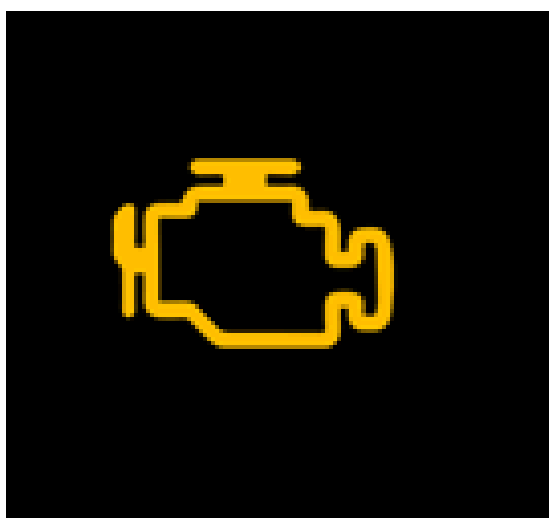
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Engine or
emissions issue.

ACTION

Use ChiltonLibrary
to run diagnostics
and troubleshoot.

TEENS

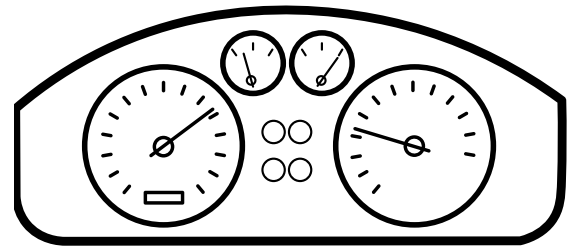
ADULTS

MULTIGEN

CHILTONLIBRARY

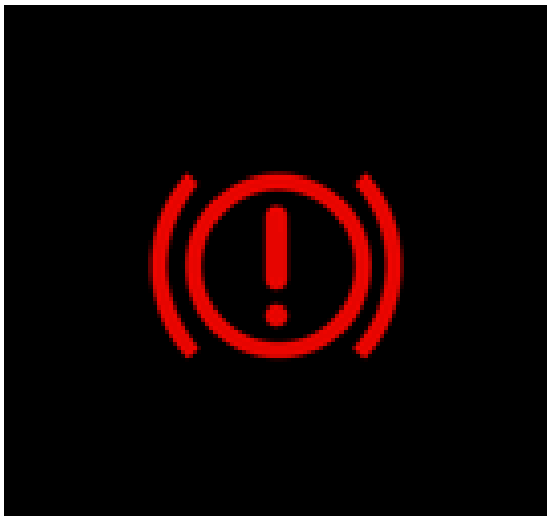
Dashboard Light Decoder

Station 3



Instructions: Match the dashboard symbol with its meaning and action.

SYMBOL



Print and cut out on dotted lines. Mix up and separate into specific piles:

- Symbol
- Meaning
- Action

MEANING

Brake system alert.

ACTION

Check brake fluid
level or disengage
parking brake.

Mystery Repair Case File

Station 4



Case #1:

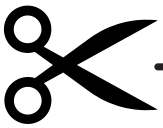
“

***CAR WON'T START. WHEN I TURN THE KEY,
IT JUST MAKES A RAPID CLICKING NOISE.***

”

Possible causes:

1. Dead Battery.
2. Alternator Failure.
3. Low Tire Pressure.



Likely Repair:

Replace or recharge
battery.

Mystery Repair Case File

Station 4



Case #2:

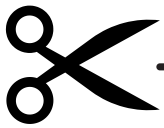
“

***WHITE SMOKE IS COMING FROM THE
TAILPIPE AFTER I START THE CAR.***

”

Possible causes:

1. Coolant leaking into the engine.
2. Worn-out brake pads.
3. Cracked Head gasket.



Likely Repair:

Diagnose coolant leak,
head gasket issue.

Mystery Repair Case File

Station 4



Case #3:

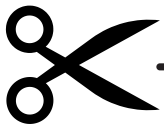
“

***STEERING WHEEL SHAKES WHENEVER
I BRAKE AT HIGH SPEED.***

”

Possible causes:

1. Warped brake rotors.
2. Low windshield washer fluid.
3. Loose wheel lug nuts.



Likely Repair:

Replace brake rotors.

Mystery Repair Case File

Station 4



Case #4:

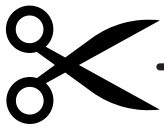
“

***TEMPERATURE GAUGE GOES INTO
THE RED AFTER 15 MINS OF DRIVING***

”

Possible causes:

1. Broken radiator fan.
2. Low coolant levels.
3. Faulty thermostat.



Likely Repair:

Check coolant and
replace thermostat or
fan.

Mystery Repair Case File

Station 4



Case #5:

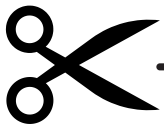
“

***CAR SHAKES WHEN IDLING AT
STOPLIGHTS, ENGINE FEELS JUMPY***

”

Possible causes:

1. Dirty air filter.
2. Worn spark plugs.
3. Flat spare tire.



Likely Repair:

Replace spark plugs
or clean air filter.