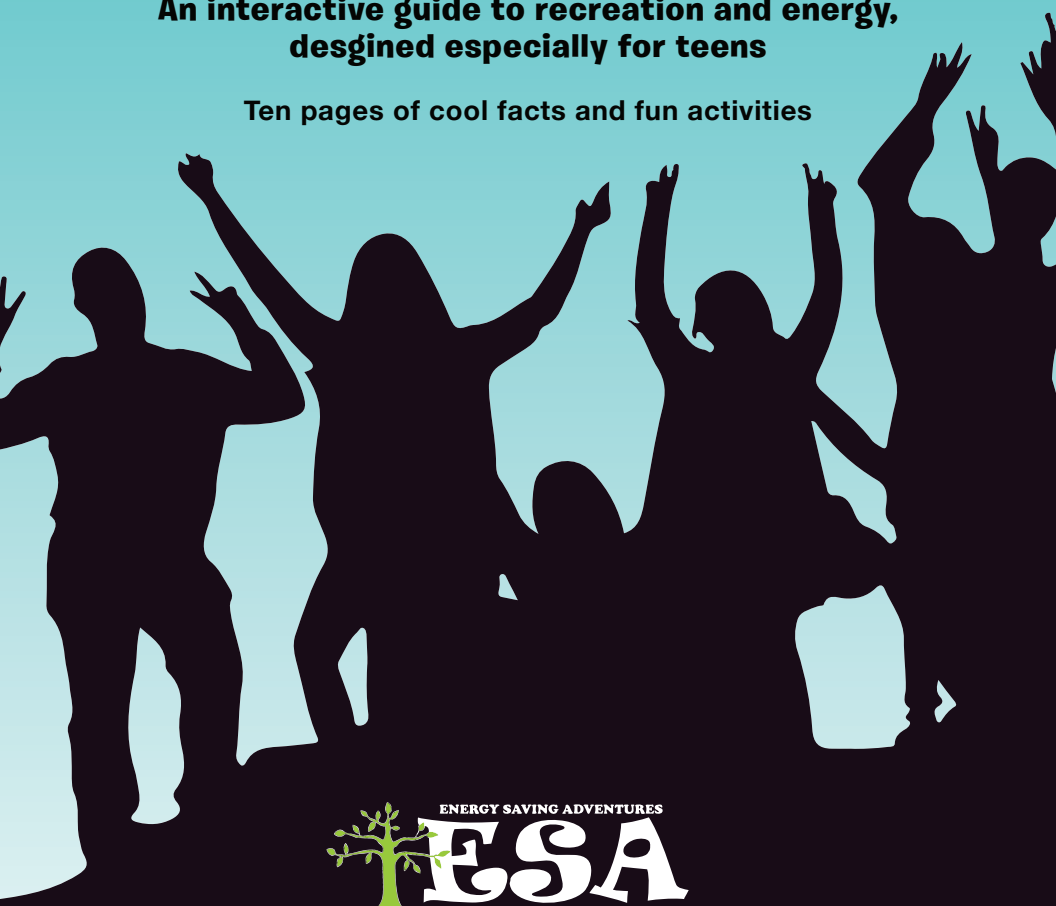
THE SCENE WORKBOOK

An interactive guide to recreation and energy, desgined especially for teens

Ten pages of cool facts and fun activities



ENERGY SAVING ADVENTURES
ESA
REC Club Unplugged

COUNTY OF SAN DIEGO
PARKS AND RECREATION

"UNLESS SOMEONE LIKE YOU CARES A WHOLE AWFUL LOT, NOTHING IS GOING TO GET BETTER. IT'S NOT."

- THEODOR SEUSS GEISEL

Welcome

Promise to the community.

As we move forward with development and the technological advances begins to take over, some of us have lost sight of the simple things that bring us joy. As part of possibly the last generation of free range kids, a group that played outdoors until the street lights came on – I am committed to mentoring the next generation of eco-warriors and outdoor adventure enthusiasts.

I am driven by my affinity for sports, and it has created a passion that has fueled the Energy Saving Adventures program to grow in new directions, and well beyond anything I could have ever imagined.

My goal is to sustain the momentum this program has gained with new content focused on real-world challenges, and with games and activities that make learning fun.

Participation is helping to share a new generation of environmental ambassadors - aware of their surroundings and how their actions do impact their carbon footprint.

I present to you the first edition of the SCENE, a teen guide to recreation and energy.

Please feel free to print this out and enjoy it on your own time.

Caroline Bartolome

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SDGE

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Thank you San Diego Gas & Electric for your continued support, which makes the Energy Saving Adventures program possible.

sdge.com/its-on

REC CLUB UNPLUGGED

The REC Club program was developed to make a positive difference in the lives of teens. The Club offers opportunities for middle and high school youth, ages 10 to 17, to grow through physical fitness, art, leadership development, community service, workforce development and educational activities while enhancing self-esteem, communication skills, problem solving and community involvement.

REC Club membership is free, membership application required. All activities including field trips are free to REC Club members. Field trip space is limited and participants are chosen based on behavior and participation in organized classes and activities.

Energy Saving Adventures (ESA) encourage youth to take charge of their future through resource preservation. Teens take field trips, run experiments and produce films to create change in the world around them! Call 858-966-1328 to learn more.

Nature Explorers is an outdoor adventure program that teaches teens about sustainability and self-sufficiency. Environmental energy education programs engage teens at all levels, from junior to explorer to mentor! Call 619-667-6839 to learn more.

ESA and Nature Explorers are part of the County of San Diego Department of Parks and Recreation REC Club program, located at:

Lakeside Teen Center
9911 Vine St.
Lakeside
619-443-4169

Spring Valley Teen Center
838 Kempton St.
Spring Valley
619-667-6835

IMPORTANT TERMS

These definitions are provided by the U.S. Department of Energy and Environmental Protection Agency. Learn more at energy.gov and epa.gov.

ENERGY
power that comes from mass, position or motion
A standard unit of electrical power equals 1,000 watts.

PRESERVATION
to keep alive or in existence; make lasting

CONSERVATION
the act of conserving, prevention of injury, decay, waste or loss

ENERGY EFFICIENCY
reducing energy or demand without reducing the end-use benefits

PERFORMANCE EFFICIENCY
actual input of a person, compared with the desired or planned output – expressed usually as a percentage

RENEWABLE ENERGY
energy generated from natural resources such as sunlight, wind, rain, tides and geothermal heat
California leads the nation in producing 52.2% of the nation's solar energy.

SOLAR ENERGY
power generated from sunlight
The average amount of solar radiation that reaches Earth is equal to 1,353 watts per square meter.

WIND ENERGY
power generated from wind-turning turbines

GEOTHERMAL ENERGY
power generated from heat from the Earth's core
Geothermal water heaters can cut energy bills by up to 65%!

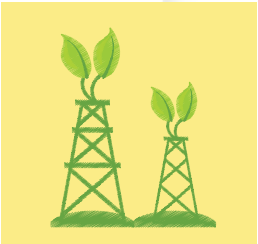
NATURAL RESOURCES
materials that come from the Earth, such as water and fuels
The County's Multiple Species Conservation Program preserves San Diego's unique, native habits and wildlife.

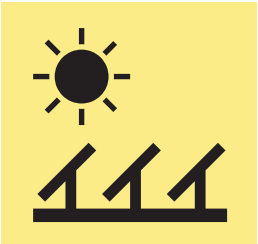
RECYCLING
processing used materials into new products to prevent waste of useful materials.
The annual recycling rate in the United States is 25.8%.

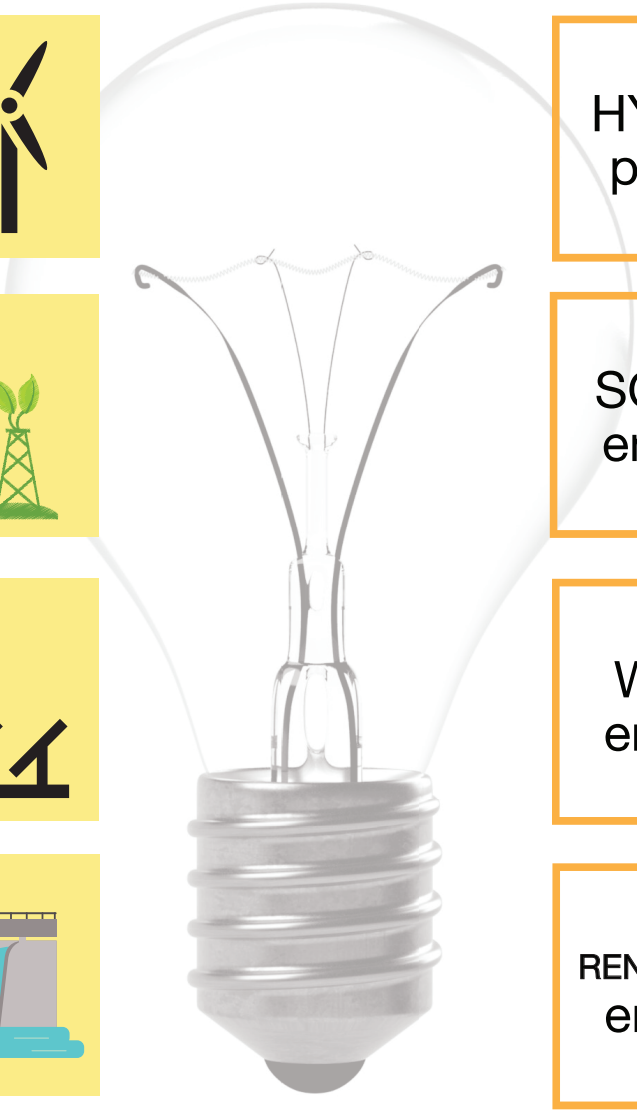
Now that you have the basics, complete the following activities to test your energy knowledge.

ENERGY MATCHING

Match the following icons with their energy source:







HYDRO power

SOLAR energy

WIND energy

RENEWABLE energy

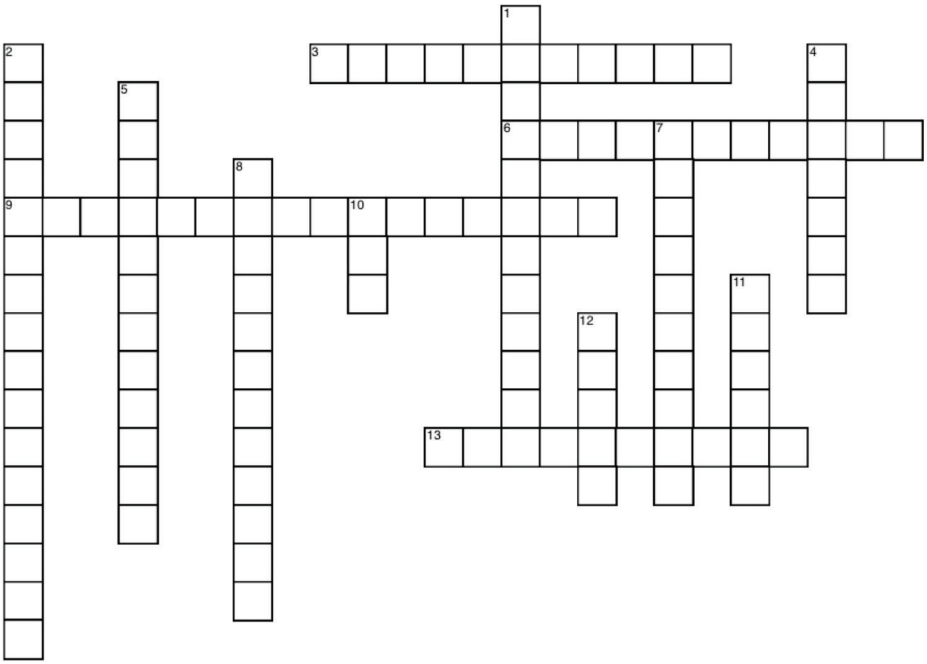
ENERGY WORD SEARCH

Can you find all of the energy terms?

- ☐ VAMPIRE
- ☐ PRESERVATION
- ☐ RENEWABLE
- ☐ WIND
- ☐ RECYCLE
- ☐ ENERGY
- ☐ KILOWATT
- ☐ CONSERVATION
- ☐ BIOFUEL
- ☐ HYDROPOWER
- ☐ EFFICIENCY
- ☐ WASTE
- ☐ SOLAR
- ☐ GEOTHERMAL

D	U	U	S	Z	G	X	E	B	F	A	S	U	P	B
E	M	E	N	O	I	T	A	V	R	E	S	E	R	P
D	R	S	H	J	O	L	N	W	F	R	G	Q	G	R
S	O	L	A	R	Z	N	C	F	U	V	K	R	E	O
D	W	Y	C	N	E	I	C	I	F	F	E	E	O	E
R	N	W	A	S	T	E	R	V	H	O	I	C	T	N
K	B	I	O	F	U	E	L	V	F	Z	Y	Y	H	E
W	F	Z	W	K	I	E	M	I	F	J	X	C	E	R
N	O	I	T	A	V	R	E	S	N	O	C	L	R	G
O	X	K	N	I	T	K	E	D	Q	P	V	E	M	Y
Q	P	G	D	J	Q	J	L	W	A	L	N	V	A	V
O	N	E	L	B	A	W	E	N	E	R	N	A	L	G
H	Y	D	R	O	P	O	W	E	R	V	W	Y	Y	H
O	A	I	E	R	I	P	M	A	V	E	A	Q	X	R
M	U	I	S	K	I	L	O	W	A	T	T	O	J	Y

RESOURCE ADVENTURES



Put your energy knowledge to the test using the following clues!

ACROSS

3. All living and non-living things such as air, water, soil, plants and animals found on Earth
6. The generation of electricity from sunlight
9. Heat within the Earth's core is used to generate this type of energy
13. A useful form of energy generated from the use of turbines

DOWN

1. Preventing waste
2. Strategies or technology that require less energy to perform the same function
4. A rotating device, like a windmill, that converts movement through air into electricity
5. Another device that converts movement through air into electricity
7. Energy generated from natural resources that will not run out
8. The effort of keeping from injury, loss, or decay
10. Technology that uses a fraction of the amount of energy to emit higher fluoresence than older lightbulbs
11. Power generated from mass, motion or position
12. By saving this resource, you are indirectly saving energy, too

ENERGY SCRAMBLE

Can you guess what energy term relates to the scrambled words in the 12 instances below?

Performance	Conservation	Preservation	Recycling
Renewable	Solar	Energy	Wind
Hydroelectric	Efficiency	Geothermal	Resources

1. RYNEEG — E n _ _ _ _
2. IENPASRVETOR — _ _ _ _ e _ _ _ t _ o _
3. FFYEICNIEC — E _ _ _ _ _ e _ c _
4. OCSRIVEANONT — _ o _ _ e _ _ _ _ _ _ n
5. EOFNMRAERPC — P _ _ _ _ r _ _ n _ _
6. EERNALBWE — R _ _ _ _ _ _ _ e
7. ORLAS — _ _ _ a _
8. NIWD — _ _ _ d
9. LEEGHROMAT — _ e o _ h _ _ _ _ _
10. OCDCRITYLREEH — _ _ _ _ o e _ _ _ _ _ _ c
11. RUSOSEECR — _ e _ _ _ r _ _ _
12. ICLCRENYG — _ _ _ _ _ l i _ _

DIY ENERGY ROBOT

Collect scrap materials at home and create your own energy robot! Draw your energy robot below. Consider these factors:

- “What type of energy does it use?”
- “How does it save energy?”
- "What is it made out of?"
- "What special powers does it have?"

Energy Robot Name: _____

BIOMIMICRY WORD SCRAMBLE

Unscramble the following words:

1. immcirobiy _____
2. atbhait _____
3. egyern _____
4. gndesi _____
5. tanoaapitd _____
6. reisdityiovb _____
7. eyniccfeif _____
8. otmsescey _____
9. ghecaelnl _____
10. agtysetr _____
11. tnfcuoin _____
12. rctrsuute _____
13. esienrtil _____
14. paetnrt _____
15. lrmaduo _____
16. rnpciilpe _____
17. rvesepre _____
18. ncesoevr _____
19. ienutasalbs _____
20. rseospc _____
21. siibyssmo _____
22. eanweebrl _____
23. ngere _____
24. ercycel _____

Word Choices

ecosystem	symbiosis	adaptation	function
efficiency	strategy	resilient	structure
recycle	sustainable	renewable	design
preserve	modular	process	pattern
challenge	energy	conserve	green
biomimicry	habitat	principle	biodiversity

EARTH DAY EVERYDAY!

WRITE WHAT YOU LOVE ABOUT OUR PLANET!

_____

_____

_____

_____

_____

_____

_____

_____

_____

Take the pledge!

I pledge to save energy and care for our planet.

Name _____

You are now part of THE SCENE

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ACTIVITY SOLUTIONS