

ANSWERING QUESTIONS



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Your answers to 10 tricky children's questions

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What is time? Why do I like pink?

This week the Magazine posed 8 awkward questions children ask their parents. Here are suggestions, from readers and experts, on how to answer these stumpers.

Where do bees go in winter? Don't know the answer? You're not the only one.

According to a new survey, four out of five UK parents have been stumped by something their children have asked. So we posed our own question - what difficult things have children asked you?

We then threw 10 of the best back to the readers, asking for kid-level answers you would offer. Here's a selection of the best - along with suggested answers from a philosopher and from experts from the Science: So what? So everything campaign.

1. WHY DON'T ALL FISH DIE WHEN LIGHTNING HITS THE SEA?

"The lightning spreads out through the whole of the sea, so there's only enough electricity to give each fish a tiny electric shock, so small that it wouldn't even notice."

Matt, Winchester

"Think of it like this: If you poured a drop of Ribena into a teaspoon, you would see that it was a very dark purple color. Now, if you poured that into a bath full of water, it would spread out and soon disappear completely. Lightning is just like that - when it hits the water, it spreads out straight away and becomes harmless to all but those at the very point where it entered the sea (lightning moves a lot more quickly than Ribena, but doesn't taste as nice)."

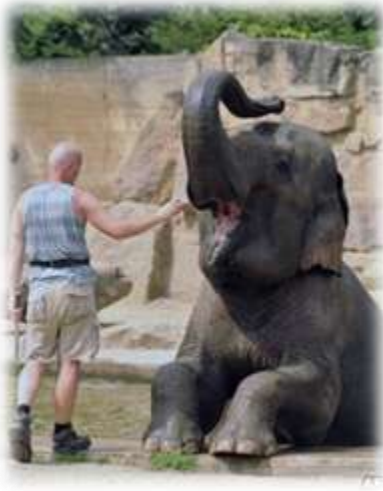
Darryl, Cardiff



Expert's answer from the Institute of Physics: "Fortunately, only very unlucky fish ever get killed by lightning. Air is an electrical insulator, which means that electricity cannot normally flow through it. During a lightning storm, the very large voltage between the cloud and the ground causes the air in between to break down along a very narrow path, and all the electricity passes down this path (called the lightning streak). When someone is killed by lightning, he or she has unluckily become part of the path and the enormous current that passes through the body kills him or her. Sea water, on the other hand, conducts electricity so as soon as the current enters it, it spreads out in all directions and any fish in the way

would probably only experience a small current passing through it, so sparing it from death. Only fish very near the water's surface would be killed. A fish as little as a foot below the surface would probably be quite safe."

2. HOW MUCH DOES THE SKY WEIGH?



"About the same as 10 million million elephants."
Stu, West Bromwich

"The sky weighs 14 pounds for every square inch on the earth's surface. That ends up being more than 11 billion billion pounds."

Kop, Salt Lake City, Utah, US

"More than you think, kid. The Earth has a surface area of 197 million square miles. Multiply that by four billion to give you the number of square inches. With atmospheric pressure being an average 14.7 lbs (6.6kg) per square inch, this means that the sky weighs roughly 5.2 million billion metric tons. Now go to bed."

Boris, West Midlands

Expert answer from the Science and Technology Facilities Council's Space Science and Technology Department: "If you want the total weight then it's about one millionth of the mass of the Earth, which is the equivalent of 570,000,000,000,000 adult Indian elephants."

3. WHY AREN'T BIRDS ELECTROCUTED ON WIRES?



"Because the wires are only dangerous when there is a way to touch the ground. If the birds had one foot on the wire and one on the ground, they would be electrocuted."

Tony Hengeveld, Stevenage, UK

"It's like touching your tongue to just one end of a battery - then your tongue doesn't go tingly, but if you touch both ends at the same time, it does. Electricity has to flow between a positive and a negative, and birds only touch one wire at a time."

Aidan Reilly, Cambridge

Expert answer from the Space Science and Technology Dept: "Being electrocuted involves a current passing through you. For a bird to be electrocuted it would need to touch two wires at different voltages, or one wire and the grounded structure of the pylon, at the same time. If they did this there would be a current flow and the bird would be likely to be electrocuted. However this is very unlikely to happen and electricity authorities also give considerable thought to the design of their pylons to minimise the chance of birds being electrocuted."

4. WHAT IS TIME?

"It's a big shoelace of beads stretching into the distance and each bead is a little moment where we have done something that we remember - either fun, or bad, or sad."

Elizabeth Whyman, Crawley, West Sussex

"Time is an idea thought up by people, to organize their lives and make sure everyone knows when things are meant to happen. So that when Mr A plans a meeting with Mr B they both arrive at the same time on the same day in the same year. It is a system that counts in years, seasons, months, weeks, days, hours, minutes and seconds."

Gita, London



"Everything is always getting older - the grass is getting older, the cheese in the fridge is getting older, the table in this room is getting older, and people and animals are always getting older, too. Time is a way of measuring things getting older, a way of helping us to see exactly how much older anything is getting."

Adam Budd, Edinburgh

Expert answer from the Space Science and Technology Dept: "This is a difficult question to answer. Some scientists may call time the flow of cause and effect. A more detailed explanation could be, according to the Theory of General Relativity, that time is the path which an object will take through a four dimensional universe when left to itself. In such a universe, the four dimensions are indistinguishable from one another: they are not three dimensions of space and one of time. Such an approach can be used to explain the time dilation of special relativity - that time slows down as one approaches the speed of light in a vacuum - but this is not an argument that is accepted by all scientists."

5. WHY IS THE MOON SOMETIMES OUT IN THE DAY, TOO?



"The moon is actually in the sky for a lot more time than you can see it, but the Sun's so bright that it outshines it. It's like streetlights - if a streetlight is on during the day, you can't see it from further down the street because there's too much sunlight, but at night you can see the same streetlight from a long way away because everything else is darker."

Graham Bartlett, Cambridge, UK

"Its school is on holiday."

Freddie, Durham

Expert answer from the Institute of Physics: "When the Moon revolves round the Earth, half of the time it is on the same side of the Earth as the Sun, and the rest of the time, they are on opposite sides. When the Moon and Sun are on the same side, the Moon is 'up' during

the day. When they are on the opposite sides, the Moon is 'up' during the night. So surprise, surprise, the Moon is up during the day as often as it is up at night."

6. WHY DID GOD LET MY KITTEN DIE?

"If all kittens lived forever, there would be no room in the world for new baby kittens. Perhaps your kitten died because somewhere in an animal shelter there is a very lonely young kitten who needs the loving home you could provide for him or her."

Carol Poster, Toronto, Canada

"Sometimes, pets get very sick. Vets try to make the animal better, but they can't always because sometimes the pet is too ill. It is kinder to let the animal die than to make it live longer but in pain."

Mark Booth, Stockton on Tees



Mark Vernon's answer: "No-one knows for sure, though many people have tried to find an answer. What we do know is that when people and pets die, we care for them all the more, which says a lot about why compassion is so important."

Or, a really short answer: "No-one knows, but you know you care."

7. WHY DO I LIKE PINK?



"Most people have a favorite color. It's their favorite because seeing it makes them feel good. You like pink now, but when you are older, you may like a different color."

John Woodgate, Rayleigh, England

"Because it is a beautiful, happy colour associated with lots of lovely things including flowers, food and rosy cheeks."

Ros, Cambridge

"Girls have been conditioned to like pink. Society has decided that pink is a girl's colour and manufacturers have pandered to this stereotype and produced virtually all girls' toys and most clothes pink. This means that girls are always surrounded by pink and their favourite toys are pink."

Daniel Meadowcroft, Stockport

And psychologist Dr Stephen Briers, of the Science: So what? So everything campaign, says: "Traditionally it is thought girls like pink more than boys do. Scientists have found there may be a biological basis for why girls prefer pink, or at least more reddish colours than boys. Research has found that although more people prefer blue, women tend to prefer pinker shades. Some biologists say that this is because in Stone Age times a woman's role

was to pick out reddish-coloured fruit, so they became more sensitive to reddish colours. Another scientist has suggested females may also prefer reddish colours because they need to be more able to spot when their children are ill with a fever (and therefore have a more reddish tone to their faces), or because changes in skin colour can let you know what a person is feeling and help females to read emotions better."

8. WHY IS WATER WET?

"Water is wet because it's not too hot and not too cold. If it's too cold, water turns to ice. Ice isn't wet at all, it's solid and dry. It has to warm up to melt back into water. If water is too hot, it turns to steam. Steam isn't wet either, it's more like air. It has to touch something cool - like the bathroom mirror - then it becomes water again. It's lucky for us that water is wet when it's not too cold and not too hot. Just right for bubble baths."
Mark McAndrew, Manchester, UK



Expert answer from Stephanie Bell, of the National Physical Laboratory: "There are two answers to this question: One answer is about what makes liquids stick to surfaces and 'wet' them - which is to do with forces between molecules. Water molecules are 'polar' - the arrangement of electrons means that electrical charge isn't evenly spread - and this makes water particularly attracted (electrically) to many surfaces. It also causes water to have lots of other interesting properties.

"But why does water feel wet? This is for a completely different reason. When you have water on your clothes or skin, it normally evaporates into the surrounding air. Evaporation produces cooling, because it takes energy. The feeling of wetness is actually coldness. You can test this by comparing water with another liquid - cooking oil - which doesn't evaporate so freely. Fill two small cups (egg-cups are ideal) - one with water, and the other with cooking oil. (Young children should ask an adult to help.) Let both liquids come to room temperature for a day, or overnight. Dip one index finger in each liquid, lift them out, and then observe for a few minutes."

QUESTIONS FOR GOD TO ANSWER

AVRAHAM QUESTIONS GOD

Bereishis Chapter 18	בראשית פרשת וירא פרק יח
23 And Abraham drew near, and said: 'Will You destroy the righteous with the wicked?	כג וַיֵּגֶשׁ אַבְרָהָם וַיֹּאמֶר הֲאֵף תִּסְפֶּה צְדִיק
24 Perhaps there are fifty righteous within the city; will You indeed destroy and not forgive the place for the fifty righteous that are there?	עֶם־רָשָׁע: כד אֲוִלִי יֵשׁ חֲמִשִּׁים צְדִיקִים בְּתוֹךְ הָעִיר הָאֵף תִּסְפֶּה וְלֹא־תִשָּׂא לְמָקוֹם לְמַעַן חֲמִשִּׁים הַצְדִּיקִים
25 Far be it from You to do so, to slay the righteous with the wicked, that so the righteous should be as the wicked; far be it	אֲשֶׁר בִּקְרָבָה: כה חֲלָלָה לָךְ מַעֲשֵׂת כְּדִבַּר הַזֶּה לְהַמִּית צְדִיק עֶם־רָשָׁע וְהִיא כְּצִדִּיק כְּרָשָׁע חֲלָלָה לָךְ הַשֹּׁפֵט כז כֹּל־הָאָרֶץ לֹא יַעֲשֶׂה מִשְׁפָּט כו וַיֹּאמֶר יְקֹנֶךָ אִם־אֶמְצָא בְּסֹדֶם חֲמִשִּׁים צְדִיקִים

<p>from You; should the Judge of all the earth not do justly?</p> <p>26 And God said: 'If I find in Sodom fifty righteous within the city, then I will forgive all the place for their sake.'</p> <p>27 And Abraham answered and said: 'Behold now, I have taken it upon myself to speak to God, who am I but dust and ashes. 28 Perhaps there shall lack five of the fifty righteous; will You destroy the entire city for lack of five?' And He said: 'I will not destroy it, if I find there forty five.'</p> <p>29 And he spoke to Him yet again, and said: 'Perhaps there shall be forty found there?' And He said: 'I will not do it for the forty's sake.'</p> <p>30 And he said: 'Oh, God, do not be angry, and I will speak. Perhaps there shall thirty be found there?' And He said: 'I will not do it, if I find thirty there.'</p> <p>31 And he said: 'Behold now, I have taken upon me to speak again to God. Perhaps there shall be twenty found there?' And He said: 'I will not destroy it for the twenty's sake.'</p> <p>32 And he said: 'Oh, God do not be angry, and I will speak yet but this once. Perhaps ten shall be found there?' And He said: 'I will not destroy it for the ten's sake.'</p> <p>33 And God went His way, as soon as He had left off speaking to Abraham; and Abraham returned unto his place.</p>	<p>בְּתוֹךְ הָעִיר וְנִשְׁאַתִּי לְכָל־הַמָּקוֹם בְּעִבּוּרָם (כז) וַיַּעַן אַבְרָהָם וַיֹּאמֶר הִנֵּה־נָא הוֹאֵלֹתִי לְדָבָר אֶל־אֲדֹנָי וְאֶנֹּכִי עֹפֹר וְאֶפֶר (כח) אוֹלֵי יִחְסְרוּן חֲמִשִּׁים הַצְדִּיקִים חֲמִשָּׁה הַתְּשֻׁחִית בְּחֲמִשָּׁה אֶת־כָּל־הָעִיר וַיֹּאמֶר לֹא אֲשַׁחִית אֶם־אֶמְצָא שָׁם אַרְבָּעִים וּחֲמִשָּׁה (כט) וַיִּסֹּף עוֹד לְדָבָר אֵלָיו וַיֹּאמֶר אוֹלֵי יִמְצְאוּן שָׁם אַרְבָּעִים וַיֹּאמֶר לֹא אֶעֱשֶׂה בְּעִבּוּר הָאֲרָבָעִים (ל) וַיֹּאמֶר אֶל־נָא יֵחָר לֹאֲדֹנִי וְאֲדַבְּרָה אוֹלֵי יִמְצְאוּן שָׁם שְׁלֹשִׁים וַיֹּאמֶר לֹא אֶעֱשֶׂה אֶם־אֶמְצָא שָׁם שְׁלֹשִׁים (לא) וַיֹּאמֶר הִנֵּה־נָא הוֹאֵלֹתִי לְדָבָר אֶל־אֲדֹנִי אוֹלֵי יִמְצְאוּן שָׁם עֶשְׂרִים וַיֹּאמֶר לֹא אֲשַׁחִית בְּעִבּוּר הָעֶשְׂרִים (לב) וַיֹּאמֶר אֶל־נָא יֵחָר לֹאֲדֹנִי וְאֲדַבְּרָה אֶדְהַפְעִם אוֹלֵי יִמְצְאוּן שָׁם עֶשְׂרָה וַיֹּאמֶר לֹא אֲשַׁחִית בְּעִבּוּר הָעֶשְׂרָה (לג) וַיֵּלֶךְ יִקְוֹךְ כְּאִשֶּׁר כָּלָה לְדָבָר אֶל־אַבְרָהָם וַיֹּאבְרָהֶם שָׁב לְמִקְמוֹ</p>
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❖ WHAT QUESTIONS IS AVRAHAM ASKING GOD?

❖ HOW IS GOD ANSWERING HIM?

MOSHE QUESTIONS GOD

Talmud Bavli Menachos 29b	תלמוד בבלי מסכת מנחות דף כט עמוד ב
<p>Moshe asked Hashem (in talking about Rabbi Akiva) "Master of the world, if you have a man like this, why didn't you give the Torah through him?" Hashem said: "Be silent, this is my plan!" Moshe replied: "Master of the universe, show me his rewards." Hashem showed him Rabbi</p>	<p>הלכה למשה מסיני, נתיישרה דעתו. חזר ובא לפני הקב"ה, אמר לפניו: רבונו של עולם, יש לך אדם כזה ואתה נותן תורה ע"י? אמר לו: שתוק, כך עלה במחשבה לפני. אמר לפניו: רבונו של עולם, הראיתני תורתו, הראני שכרו, אמר לו: חזור [לאחורך]. חזר לאחוריו, ראה ששוקלין בשרו במקולין, אמר לפניו: רבש"ע, זו תורה וזו</p>

Akiva's flesh being scored from his body and sold in the markets of Rome. Moshe said, "Master of the universe, this is the Torah and this is its rewards?" Hashem replied, "Silence, this is my plan!"	שכרה? א"ל: שתוק, כך עלה במחשבה לפני
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- ❖ WHAT IS MOSHE'S QUESTION?
- ❖ WHAT IS GOD'S RESPONSE?
- ❖ WHAT IS YOUR REACTION TO THE RESPONSE?

YONAH QUESTIONS GOD

Yonah Chapter 4	יונה פרק ד
<p>1 But it displeased Jonah exceedingly, and he was angry.</p> <p>2 And he prayed to God, and said: 'I pray to You, God, was not what I said to you when I was in my own land? Therefore I fled beforehand to Tarshish; for I knew that You are a gracious God, and compassionate, long-suffering, and abundant in mercy, and repentant of evil.</p> <p>3 Therefore now, God, take, I beg You, take my life from me; for it is better for me to die than to live.'</p> <p>4 And God said: 'Are you greatly angry?'</p> <p>5 Then Jonah went out of the city, and sat on the east side of the city, and there made him a booth, and sat under it in the shadow, till he might see what would become of the city.</p> <p>6 And God prepared a gourd, and made it to come up over Jonah, that it might be a shadow over his head, to deliver him from his suffering. So Jonah was exceeding glad because of the gourd.</p> <p>7 But God prepared a worm when the morning rose the next day, and it attacked the gourd, that it withered.</p> <p>8 And it came to pass, when the sun arose, that God prepared a vehement east wind; and the sun beat upon the head of Jonah, that he fainted, and requested for himself that he might die, and said: 'It is better for me to die than to live.'</p>	<p>(א) וירע אליונה רעה גדולה ויחר לו (ב) ויתפלל אליקוק ויאמר אנה יקוק הלואזה דברי עדהייתי עלאדמתי עלכן קדמתי לברח תרשישה כי ידעתי כי אתה אלחנן ורחום ארך אפים ורבחסד ונחם עליהרעה (ג) ועתה יקוק קחנא אתנפשי ממני כי טוב מותי מחיי: ס (ד) ויאמר יקוק ההיטב חרה לך (ה) ויצא יונה מןהעיר וישב מקדם לעיר ויעש לו שם סכה וישב תחתיה בצל עד אשר יראה מהיהיה בעיר (ו) וימן יקוקאלהים קיקיון ויעל מעל ליונה להיות צל עלראשו להציל לו מרעתו וישמח יונה עלהקיקיון שמחה גדולה (ז) וימן האלהים תולעת בעלות השחר למחרת ותך אתהקיקיון וייבש (ח) ויהי כזרח השמש וימן אלהים רוח קדים חרישית ותך השמש עלראש יונה ויתעלף וישאל אתנפשו למות ויאמר טוב מותי מחיי (ט) ויאמר אלהים אליונה ההיטב חרהלך עלהקיקיון ויאמר היטב חרהלי עדמות (י) ויאמר יקוק אתה חסד עליהקיקיון אשר לאעמלת בו ולא גדלתו שבןלילה היה ובןלילה אבד (יא) ואני לא אחוס עלנינוה העיר הגדולה אשר ישבה הרבה משתיםעשרה רבו אדם אשר לאידע ביןימינו לשמאלו ובהמה רבה</p>

<p>9 And God said to Jonah: 'Are you so distressed for the gourd?' And he said: 'I am greatly angry, even to death.'</p> <p>10 And God said: 'You have pity on the gourd, for which you have not labored, or made it grow, which came up in a night, and perished in a night;</p> <p>11 And should not I have pity on Nineveh, that great city, wherein are more than twelve thousand people that cannot discern between their right hand and their left hand, and also much cattle?'</p>	
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❖ WHAT IS JONAH'S QUESTION?

❖ HOW DOES GOD RESPOND?

TYPES OF ANSWERS

- ❖ God answers Moshe, Avraham and Yonah differently.
- ❖ Each question is different and therefore requires a different approach.
- ❖ Consider how you approach your answers depending on the type of question you are asked.

