Summary of uses of the English word "nature" in the NIV New Testament, compared with occurrences of the Greek word "phusis" ("nature", Strong's 5449) and "phusikos" ("natural", Strong's 5446). (NIV from http://biblegateway.com/cgi-bin/bible/.)

25 verses use the word "nature" to translate "flesh" [sarx]:

22 verses (of those 25) use the code phrase "sinful nature," all translating "flesh."

Romans 7:5 For when we were controlled by the sinful nature, the sinful passions aroused by the law were at work in our bodies, so that we bore fruit for death.

Romans 7:18 I know that nothing good lives in me, that is, in my sinful nature. For I have the desire to do what is good, but I cannot carry it out.

Romans 7:25 Thanks be to God—through Jesus Christ our Lord! So then, I myself in my mind am a slave to God's law, but in the sinful nature a slave to the law of sin.

Romans 8:3-5 For what the law was powerless to do in that it was weakened by the sinful nature [sinful flesh], God did by sending his own Son in the likeness of sinful man [flesh] to be a sin offering. And so he condemned sin in sinful man [sinful flesh], 4 in order that the righteous requirements of the law might be fully met in us, who do not live according to the sinful nature [flesh] but according to the Spirit. Those who live according to the sinful nature [flesh] have their minds set on what that nature desires [on things of the flesh]; but those who live in accordance with the Spirit have their minds set on what the Spirit desires.

Romans 8:8 Those controlled by the sinful nature cannot please God.

Romans 8:9 You, however, are controlled not by the sinful nature but by the Spirit, if the Spirit of God lives in you. And if anyone does not have the Spirit of Christ, he does not belong to Christ.

Romans 8:12,13 Therefore, brothers, we have an obligation—but it is not to the sinful nature, to live according to it. For if you live according to the sinful nature, you will die; but if by the Spirit you put to death the misdeeds of the body, you will live....

Romans 13:14 Rather, clothe yourselves with the Lord Jesus Christ, and do not think about how to gratify the desires of the sinful nature.

1 Corinthians 5:5 Hand this man over to Satan, so that the sinful nature may be destroyed and his spirit saved on the day of the Lord.

Galatians 5:13 You, my brothers, were called to be free. But do not use your freedom to indulge the sinful nature; rather, serve one another in love.

Galatians 5:16,17 So I say, live by the Spirit, and you will not gratify the desires of the sinful nature. For the sinful nature desires what is contrary to the Spirit, and the Spirit what is contrary to the sinful nature. They are in conflict with each other, so that you do not do what you want.

Galatians 5:19 The acts of the sinful nature are obvious: sexual immorality, impurity and debauchery....

Galatians 5:24 Those who belong to Christ Jesus have crucified the sinful nature with its passions and desires.

Galatians 6:8 The one who sows to please his sinful nature, from that naturewill reap destruction; the one who sows to please the Spirit, from the Spirit will reap eternal life.

Ephesians 2:3 All of us also lived among them at one time, gratifying the cravings of our sinful nature and following its desires and thoughts. Like the rest, we were by nature objects of wrath.

Colossians 2:11 In him you were also circumcised, in the putting off of the sinful nature, not with a circumcision done by the hands of men but with the circumcision done by Christ....

Colossians 2:13 When you were dead in your sins and in the uncircumcision of your sinful nature, God made you alive with Christ. He forgave us all our sins....

2 Peter 2:10 This is especially true of those who follow the corrupt desire of the sinful nature and despise authority.

2 Peter 2:18 For they mouth empty, boastful words and, by appealing to the lustful desires of sinful human nature [indecent passions of the flesh], they entice people who are just escaping from those who live in error.

3 remaining verses translating "flesh," not as "sinful nature" but as "nature" of "human," "self," or "children":

Romans 1:3 ...regarding his Son, who as to his human nature [after the flesh] was a descendant of David...

Romans 6:19 I put this in human terms because you are weak in your natural selves [flesh]. Just as you used to offer the parts of your body in slavery to impurity and to ever-increasing wickedness, so now offer them in slavery to righteousness leading to holiness.

Romans 9:8 In other words, it is not the natural children [of the flesh] who are God's children, but it is the children of the promise who are regarded as Abraham's offspring.

18 other uses of the English word "nature" or "natural," not involving the Greek word for "flesh."

3 verses translating "soul" [psyche] or "soulish" [psuchikos]

1 Corinthians 15:44 It is sown a natural [psuchikos] body, it is raised a spiritual body. If there is a natural [psuchikos] body, there is also a spiritual body.

1 Corinthians 15:46 The spiritual did not come first, but the natural [psuchikos], and after that the spiritual.

Jude 1:19 These are the men who divide you, who follow mere natural instincts [psuchikoi] and do not have the Spirit.

7 miscellaneous translations of Greek terms for "blood," "sleep," "divinity," "form," "parts," "unchangeability."

John 1:13 children born not of natural descent [bloods], nor of human decision or a husband's will, but born of God. John 11:13 Jesus had been speaking of his death, but his disciples thought he meant natural sleep [slumber of sleep]. Romans 1:20 For since the creation of the world God's invisible qualities—his eternal power and divine nature [divinity]—have been clearly seen, being understood from what has been made, so that men are without excuse. Philippians 2:6,7 Who, being in very nature [en morphe] God, did not consider equality with God something to be grasped, but made himself nothing, taking the very nature [morphe] of a servant, being made in human likeness. Colossians 3:5 Put to death, therefore, whatever belongs to your earthly nature [your earthly parts]: sexual immorality, impurity, lust, evil desires and greed, which is idolatry.

Hebrews 6:17 Because God wanted to make the unchanging nature [ametatheton] of his purpose very clear to the heirs of what was promised, he confirmed it with an oath.

8 verses (out of 43) directly translate "phusis" or "phusikos" (Greek words for "nature" or "natural").

Romans 1:26,27 Because of this, God gave them over to shameful lusts. Even their women exchanged natural [phusikos] relations for unnatural [para phusin] ones. In the same way the men also abandoned natural [phusikos] relations with women and were inflamed with lust for one another. Men committed indecent acts with other men, and received in themselves the due penalty for their perversion.

Romans 2:14 (Indeed, when Gentiles, who do not have the law, do by nature [phusis] things required by the law, they are a law for themselves, even though they do not have the law...

Romans 11:21 For if God did not spare the natural [kata phusin] branches, he will not spare you either.

Romans 11:24 After all, if you were cut out of an olive tree that is wild by nature [kata phusin], and contrary to nature [para phusin] were grafted into a cultivated olive tree, how much more readily will these, the natural branches [kata phusin], be grafted into their own olive tree!

Galatians 4:8 Formerly, when you did not know God, you were slaves to those who by nature [phusei] are not gods.

1 Corinthians 11:14 Does not the very nature of things [he phusis aute] teach you that if a man has long hair, it is a disgrace to him,

Ephesians 2:3 ...Like the rest, we were by nature [phusei] objects of wrath.

2 Peter 1:4 Through these he has given us his very great and precious promises, so that through them you may participate in the divine nature [theias phusews] and escape the corruption in the world caused by evil desires.

Finally, beyond the 43 NIV verses which mention the English word "nature," there are 5 which translate occurrences of Greek "phusis" as other English words besides "nature": "physical," "birth," "instinct," "kind."

Romans 2:27 The one who is not circumcised physically...

KJV: And shall not uncircumcision which is by nature...

Galatians 2:15 We who are Jews by birth...; KJV: We who are Jews by nature

2 Peter 2:12 ... They are like brute beasts, creatures of instinct...

KJV: But these, as natural brute beasts [aloga zwa phusika]...

James 3:7 All kinds [Gk. "every nature"] of animals, birds, reptiles and creatures of the sea are being tamed and have been tamed by man.

Jude 1:10 ... what things they do understand by instinct, like unreasoning animals...

KJV: ...what they know naturally, as brute beasts [phusikws hws ta aloga zwa]